

Stop Club of Rome Genocide in Africa!

Critical Comments Appended to
The Lagos Plan of Action

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Lyndon H. LaRouche, Jr.

and the

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Stop Club of Rome Genocide in Africa!*Critical Comments Appended to**The Lagos Plan of Action*

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Letter of Transmittal

April 28, 1981

The attached report is written and submitted as a supplement to the April 28-29, 1980 Organization of African Unity's "Lagos Plan of Action."

The principal function of this report is to provide technical assistance to the governments and other representative institutions of the OAU and its member-nations.

The central task, which therefore dominates the content of this report, is to provide the kind of scientific approach to formulation of development policies which leads directly toward quantification of the amount and proportions of efforts required. What is needed is a unified conception of development, which leads to well-defined orders of magnitude of proportional effect to be allotted to each aspect of the division of labor for development.

The correlated feature of this report is to state certain crucial facts concerning obstacles to development, facts which many developing nations' governments would wish stated openly by some public voice other than their own. We elaborate, as follows.

Putting to one side for a moment what might be termed humanitarian considerations, any sane businessman recognizes the fostering of prosperity of his customers to be in the immediate, most obvious simple material interest of his firm. There is no *sane* reason behind the obstacles to development constantly generated by the leading financial institutions of the dominant economic sector. Nor, in fact, was the form of colonial policy associated with the eighteenth and nineteenth centuries' British East India Company in the actual self-interest of the people of Britain or of any other former colonial power.

Therefore, the insanity of continuing opposition to development must be publicly identified for what it is, so that we may rally the sane forces of both the industrialized and developing sectors to find their common interest in promoting the prosperity of the southern hemisphere. Someone must bring such issues openly into the public, otherwise adequate political commitment to development will not occur.

Through the special knowledge and sometimes embittered experience of this writer and his associates, in our increasing efforts for such development in the international arena since 1974, the writer and his associates have acquired the direct knowledge and the righteous anger needed to bring such crucial, and wicked facts into the open once again here, as we have frequently in the past. Therefore, once again, we assume our special kind of moral responsibilities: to be in this matter the champion of imperiled developing nations' peoples against the wickedness of antidevelopment forces among the metropolitan nations.

Faternally yours,

Lyndon Hermyle LaRouche, Jr.
Chairman, Board of Directors,
Executive Intelligence Review

Introduction

Development or Neo-Malthusian Genocide

Uganda is not, by any standard, a densely populated nation. Yet, officials of the government of the United States have stated privately their determination to foster genocide in Uganda, for the purpose of administering a brutal lesson in support of the "Global 2000" doctrine of genocide proposed by the outgoing administration of President Jimmy Carter.

The genocidal doctrine known as "Global 2000" is not currently official U.S. policy, nor do we believe that President Ronald Reagan would knowingly tolerate such an evil policy. Nonetheless, there is a powerful supranational network associated with the Club of Rome, whose agents are embedded in influential positions within the U.S. State Department and other parts of government, and who are committed to implementing such a policy even by means of subterfuge.

The rise of the so-called neo-Malthusian dogma over the course of the past decade and a half is but the most clearly evil among four principal varieties of powerful institutional obstacles to the economic development of the continent of Africa. Unless the power of those institutionalized policies is crushed, development is impossible.

Therefore, we propose that no development effort can be called either "realistic" or "practical" unless it includes a resolution for mobilizing forces adequate to eliminate those four institutionalized obstacles.

These four institutionalized obstacles to development are:

1. The influence of neo-Malthusian doctrines allied to those of the Club of Rome.
2. Post-1965-1968 policy-trends of leading international monetary institutions.

3. Institutionalized monetary and trade policies, sometimes denounced as "neocolonialist," antedating 1965-1967.
4. The hegemony of doctrines of political economy derived from the colonialist doctrines of the eighteenth and nineteenth century officials of the British East India Company (for example, Adam Smith, John Stuart Mill).

To the extent the first three of these institutionalized obstacles are not defeated, net economic development of the formerly colonial nations is impossible. To the extent the fourth of these institutionalized obstacles influences the methods of attempted development employed, those attempts must fail.

For such reasons, a development resolution becomes practical, realistic, on condition that it begins with a twofold elaboration of policy counter to these four obstacles. First, that policy must treat the body of ideas from which the four cited obstacles are spawned. Second, the policy must define the powerful networks of influence through whose influence such ideas are embodied in institutionalized obstacles of the first three types. This twofold approach must treat the matters not only in opposition to evil conceptions and influences; it must articulate counter-policies and propose counter-forces.

There are two aspects of the most recent centuries of European development which are of special relevance to such a practical and realistic approach. Twice during recent centuries, Europe suffered conditions broadly comparable to those confronting the formerly colonial regions today. In the first instance, we consider the emergence of the Golden Renaissance of the fifteenth century out of the New Dark Age of the fourteenth century. In the second instance, we focus on the central position of Jean-Baptiste Colbert and his famous protégé Gottfried Wilhelm Leibniz in leading the continent of Europe out of the ruinous conditions of the 1618-1648 Thirty Years War.

By focusing attention on those two periods, we define historically the two opposing policies to be contrasted today in the battle for economic development of Africa (in particular).

By adopting such an approach, we accomplish something more than merely defining a realistic and practical approach to institutionalized obstacles. Out of the lessons of the seventeenth and eighteenth centuries' *mercantilist* and *Kameralist* approaches to the successful economic development of Europe we adduce a unified conception of *development*, a conception readily restated in forms immediately appropriate to the case of Africa.

On the positive side of the problem of development, we must move beyond mere lists of particular requirements for development, to a *unified conception of development*.

By examining the "Lagos Plan of Action" from the vantage point of the conception we develop in the following pages, it will be made clear why we see dangers in the method of elaboration of developmental goals employed for the "Lagos Plan of Action."

It should also be clear from the same pages that we view it as indispensable to successful development of Africa to transform a growing population of students into a dedicated elite trained in the principles of development as well as in the professions of scientist, engineer, and technician in such specialties as physics, chemistry, biology, agronomy, medicine, civil engineering, and so forth.

1.

The Issue of Economics

One of the principal reasons the United Nations Organization consistently fails to produce competent economic-development proposals is the prevailing belief that dogmas taught as political economy in most of the world's universities are the font of "expertise" in such matters. These dogmas are all directly products of the procolonialist propaganda of the eighteenth-and-nineteenth-century British East India Company.

This cited persuasion of the majority among UNO circles of "technicians" is an illusion which would not have been tolerated among leading international assemblies of the eighteenth or nineteenth centuries.

During those preceding centuries it was generally known among statesmen that the industrial development of Europe and the young United States had been guided by the influence of the French *mercantilists* and the German *Kameralists* of the seventeenth and eighteenth centuries. During the nineteenth century, the name generally given to mercantilism-Kameralism was "The American System" associated with such names as U.S. Treasury Secretary Alexander Hamilton, Mathew and Henry C. Carey, and Friedrich List. This "American System" was directly adopted in that form by the Meiji Restoration in Japan, and it was List who exemplified the policies guiding the nineteenth-century industrial revolution in Germany.

The illusion is a product of the subordination of the leading policy-making of the United States to the direction of Great Britain, especially since the assassination of the anti-Britain President William McKinley, and his succession by such pro-British U.S. Presidents as Theodore Roosevelt, Woodrow Wilson, and Herbert Hoover. The assimilation of U.S. intelligence services under Britain's direction during the period to date beginning 1938 is also notable. In the aftermath of two World Wars, the United States subordinated itself to British policy in establishing the Versailles and later Bretton Woods monetary systems, and with the shift

of a large body of personnel from the British colonial office to occupy the key civil-service-type positions within the U.S.-supported World Bank.

Except for such instances as the revival of mercantilism under President Charles de Gaulle in France, the persistence of American System traditions in Japan, and vestiges of Kameralism in German institutions, systematic opposition to British political-economic dogmas enjoyed no institutionalized influence following the Second World War.

However, as new nations emerged in formerly colonial regions, leading forces of those nations expressed aspirations for technology of economic development. These aspirations echo the viewpoint one can read in the writings of such sixteenth-through-eighteenth-century mercantilists and Kameralists as Jean Bodin, Serra, Becher, G. W. F. Leibniz, et al. Rightly have British neocolonialists identified the convergence of Gaullist and developing nations' goals as "neomercantilist." The policy papers written as reports to the U.S. Congress during the first administration of U.S. President George Washington, on credit, banking, and manufactures are, in principle, up-to-date responses to the desires of developing nations today.

In consequence, although the developing nations sharing the viewpoint of the "Lagos Plan of Action" desire a world economic order consistent with Alexander Hamilton's outline of the American System, the body of putative "expertise" applied to UNO and other implementation of development-proposals is a British doctrine of political economy which opposes every aspiration and method embodied in that American System.

For these and related reasons, every proposal for promotion of economic development processed through the UNO, International Monetary Fund, World Bank, and like-thinking institutions has been foredoomed to failure. It is that problem which must be understood, if we are to define alternative, effective approaches to economic development of Africa.

British Political Economy

Therefore, we proceed by turning our attention first to the broadest features of the British and derived dogmas of political economy. Subsequently, as we outline the viewpoint of the American System and like approaches, it will be clear why the mere adoption of British political-economic doctrines is cause for inevitable failures of economic-development efforts so contaminated.

As we stated at the outset, all British and derived political-economic

dogma is a creation of the British East India Company. Adam Smith, Thomas Malthus, David Ricardo, and John Stuart Mill were officially employees of the Company, and conducted their writings in political economy under Company direction.

British political economy is divided into two broad periods. The early period, as typified by Smith and Ricardo, is a period during which the British East India Company plagiarized from the extant work of its adversaries, the mercantilists and Kameralists, although with radical revisions. This first phase of British political economy is therefore the relatively "rationalist" phase, which ends with the writings of Ricardo. The second phase, continuing to the present date, begins with the work of John Stuart Mill, W. S. Jevons, and Alfred Marshall, and is properly defined as a going over entirely to philosophical irrationalism.

Mill, Jevons, and Marshall define themselves explicitly as irrationalists. Mill and Jevons are emphatic in avowing that what they term "political economy" is nothing but the "hedonistic calculus" of the British East India Company's Jeremy Bentham.

Bentham, going radically further than Thomas Hobbes and David Hume, insisted that the human species is incapable of any other knowledge or morality but the perception of experienced pleasure and pain in the isolated, monetary experience of the isolated individual. He insisted that only a mathematical degree of accommodation of degrees of experienced pleasure and pain, in transactions among individuals, could be a guide to ordering of social practice.

Mill, Jevons, et al. adopted this doctrine of the "hedonistic calculus" from Bentham, arguing that price was the proper measure of pleasure-pain in individual transactions. They argued that fluctuations in prices reflected the efforts of individuals to achieve an optimal balance of pleasure and pain over numerous transactions. This optimization of pleasure-pain was termed "utility."

Professor Milton Friedman, who models himself explicitly on the economic policies of Nazi Germany, is fully consistent with Mill et al. in carrying Mill's irrationalist doctrine of utility to a radical extreme. Friedman and his teachers at the University of Chicago have insisted that the only permissible moral value in society is the price of any purchase-and-sale as determined over many transactions in a totally unregulated market.

It is not properly astonishing that so radical an anarchist as Professor Milton Friedman should be so often associated with totalitarian regimes and programs. Thomas Hobbes, the anarchist philosopher credited with the doctrine that society is a state of "war of each against all," is also credited with using that argument as premise for a totalitarian form of "absolute monarchy." Anarchy breeds chaos, and chaos usually leads to totalitarian forms of control of chaos.

For related reasons, the precondition for economic development of formerly colonial regions is the outlawing of British political economy in ordering of "North-South" relations. The deeper reasons for this requirement emerge as we turn our attention to the *science of technology* which emerged from the work of the mercantilists and Kameralists.

2.

The Science of Development

Over the course of the past century, it has become fashionable to attempt to make watertight distinctions between "science," as associated with the so-called mathematical doctrines, and matters of morality and culture otherwise. This separation is not only a repudiation of the views of scientists such as Leibniz and Kepler; it is not only wrong, but dangerous in its implications for practice.

The development of rationality and morality in the individual is inseparable in all essential features. The origin of morality (and rationality) is the individual's reflection on the fact of mortality. What endures with the death of the individual? It is that question which properly impels the moral person to think upon the consequences of his or her actions for future generations, and to think therefore of the self-development of his or her powers for useful activity.

Even the simplest person who is moral thinks of the consequences of his or her life for the person's children and grandchildren, and the posterity of friends and neighbors.

It is not sufficient merely *to wish* to benefit the span and duration of present and future society. There must be an agreement between the desired and actual consequences of one's actions. On this point, morality becomes a commitment to rationality.

How are these consequences determined? Clearly, the consequences of one's acts (or, acts of omission) are the chain-reaction result of one's acting upon the lawful ordering of our universe. Therefore, only by mastering the lawful composition of cause and effect in our universe do we know the probable consequences of our actions in that universe. So, without such rationality, there is no morality possible in efficient practice.

This twofoldness, this interdependence of morality and rationality, leads us more or less directly to the kinds of conceptions which properly inform economic science. To distinguish economic science from British

varieties of political economy, we define economic science as *the science of technology*. We now summarize the proof of that connection.

How can we proceed to define a science of morality? Since the subject of morality is the consequence of individual self-development for action over succeeding generations, no accurate empirical evidence can be adduced for this subject on a scale less than entire societies over generations. Since the history of a particular society over several generations may be weighted with misleading evidence, the science of morality is not well-founded unless it is premised on a more general examination of history from the vantage-point of the questions we have posed.

The simplest question to be addressed to the evidence of history is the question of certain policies of action on the production of the necessary conditions of existence for succeeding generations. This simplest, narrow question leads us efficiently to answers to the broader questions.

In modern times, archaeologists and others have reconstructed characteristic modes of existence (technologies) with reasonable accuracy. This work aids us in comparing different kinds of technologies as more or less efficient ways for perpetuating human existence.

The simplest question which must occupy our attention is the ability of a society to sustain its own existence. The cases we have to consider range from a mode of baboon-like tool-less hunting and gathering of subsistence, with a possible human-species population not in excess of a few million, to modern technology, *capable of* sustaining tens of billions of persons, and with a population presently in the order of four-and-a-half billion.

The empirical measure we require to compare societies is *potential relative population-density*. We now outline the conceptions involved.

The simplest empirical measure of the relative power of average individuals to exist is the *population-density* which can be maintained by a population of that average level of development. Since habitable land varies in quality for each technology, and is varied for better or worse by man's habitation, we can not measure population-density simply in persons per square mile. We must take into account the *relative* suitability of man-altered habitable land. Therefore, we must measure *relative population-density*.

It is not the actual, current population-density which ought to concern us. It is the *potential* population possible with the use of that technology, which concerns policy-makers. Therefore, the empirical standard we require for comparing different technologies is *potential relative population-density*.

It is possible to rank technologies as more or less advanced by comparing the potential relative population-densities associated with them.

That is the key to the study of history, and of policies which lead, variously, to a betterment or worsening of the human condition.

The correlative of a ranking of technologies in this fashion is a rise in the density of useful energy per capita (and per household). The initial developments of animal husbandry and simple gardening are energy revolutions. By the sixteenth century, scientists in England and France perceived that the human species could no longer exist on the basis of waterpower, windmill power, and burning of wood. The development of coal and the steam-engine were the hard-fought issues of the seventeenth and eighteenth century, as the fight for deployment of nuclear energy is the crucial issue of human survival generally today.

Historically, the required rate of increase of useful energy per capita is geometric. The energy per capita must increase geometrically relative to associated increases in potential relative population-density.

Furthermore, not only must the amount of energy per capita increase, but the *energy flux density* of primary sources of artificial energy must rise.

There is another crucial consideration in this.

Each mode of productive development (technology) is associated with a listable spectrum of "raw materials." Although virtually no "raw material" is *absolutely* finite relative to human needs, the amount of the available such material which can be exploited at acceptable social costs is always relatively finite in terms of any associated advancement of technology. Therefore, even were a society's population to be fixed in size, or even reduced, a society in a fixed mode of technology is always depleting the scale of resources which can be exploited at an acceptable social cost. *There are, in fact, no renewable resources* in terms of a fixed level of technology.

(The dogma concerning "renewable resources" is a recently popularized neo-Malthusian hoax.)

The continued existence of society depends upon a rate of technological progress sufficient to reduce the social cost of exploiting previously defined types of "raw materials," and to provide society with new categories of "raw materials." A society which does not advance technologically at a sufficient rate is a dying society—unfortunately, the cemeteries of history are filled with societies which failed to advance technologically at an adequate rate. A society which fails to develop technologically will be destroyed in one fashion or another; often, as we discover, a once-strong society has collapsed into depopulation and retreated toward savagery as a result of failure to sustain technological progress.

To prevent technological progress is the most efficient method of genocide against whole nations (or continents) yet devised, as efficient as intercontinental nuclear warfare. Famine, epidemic, and the homicidal

social chaos fostered by circumstances of famine and epidemic could—as the Club of Rome hopes—murder billions of people during the course of the coming two decades.

Over the course of the latter nineteenth and twentieth centuries, we have become so conditioned to using the Aristotelian dogma concerning “energy,” that it is a jolt to one’s consciousness to encounter afresh the entirely different notion of “work” and “power” associated with the geometrical development of thermodynamics and the theory of functions by Leibniz, Euler, the Bernoullis, and the Ecole Polytechnique of Carnot and Monge. Despite the “jolt,” the distinction must be made.

If, as we have indicated, technological progress is the essential precondition for successfully perpetuating human existence at a certain level of average development of the individual, then the fundamental causal relations in society are those centered upon the proper measurement of technological progress: *net increases* in the potential relative population-density.

From that standpoint, all of the work of society which merely maintains the society at the same level of potential relative population-density is describable as *virtual work*, and does not represent any *net work* by that society. *Net work* is represented by those forms and degrees of technological progress which increase the potential relative population-density.

Let us then analyze the total apparent energy-throughput of a society in those terms. Let W_s stand for the amount of work corresponding to *virtual work*, equivalent to the usage of “energy of the system” by contemporary physicists generally. Let W_f stand for the portion of total work represented by a net advance in technology (net increase in potential relative population-density). This is equivalent to the usage of “free energy” among physicists generally.

The ratio, W_f/W_s , might be termed “the free-energy ratio.” This is not an adequate measure of technology. As technology advances, as we noted earlier, the average energy-density per capita (and per household) increases. So, the notion of a mathematical function describing technological progress must include both the ratio W_f/W_s and \overline{W}_s , the latter signifying “virtual work per capita.” Let us designate this function by the symbology $F(W_f/W_s, \overline{W}_s)$, requiring that neither term of the function decrease, as a condition of either progress or “equilibrium.”

This function, defined for rising values, we have termed a “negentropic function.” Increasing values of the terms of this function are interpreted as increasing *power*.

Therefore, instead of measuring the simple energy of systems, we must abandon the *caloric* conception of energy (for example, Aristotle) in favor of *negentropy*: the negentropy associated with the combination of the heat-source and its application to producing a useful result.

In practice, this defines economic policy in the fashion Leibniz defined it: *the development of heat-powered machines* to supersede tools moved by human or animal muscle-power, to the end that a man using such a heat-powered machine can "do the work of a hundred other men" (Leibniz, *Societät* . . .) using muscle-power.

Although the discovery of thermodynamics and its direct application to economic science was unique to Leibniz, the other mercantilists and Kameralists of the seventeenth and eighteenth centuries applied the same broad policy. The degree of advancement of economic science by the close of the eighteenth century, reflecting Leibniz's thermodynamics, is typified by U.S. Treasury Secretary Alexander Hamilton's *Report To Congress On The Subject of Manufactures* (1791). Further developments in economic science, beyond Hamilton's paper, are centered in the Ecole Polytechnique, notably the work of Claude Chaptal and Charles A. Dupin.

Economic science, as we have indicated its principles here in summary, is traced directly through the work of Leibniz on interconnected, geometrical conceptions of *thermodynamics*, *work*, and *power*.

Laws of the Universe

Economic science, viewed so as a science of technology, is the rigorous basis for all scientific knowledge. It is by perfecting his knowledge of the lawful composition of the universe, to the effect of increasing the potential relative population-density of society, that man proves *in the only way possible* that such advances in knowledge are consistent with increased power over the lawful ordering of the universe. It is not properly astonishing, therefore, that Leibniz, the greatest of modern scientists after Johannes Kepler, based all of his fundamental contributions to science on the basis of his principal training and work as a Kameralist of the school of Mainz, a mercantilist of the circle of Colbert's protégés.

Technological progress is indispensable for preventing mankind from sliding into barbarism or even savagery. Although the material benefits of technological progress are indispensable to mankind in this and related ways, it is not the material satisfaction of appetites which is the true goal of such progress. The true goal is a moral goal, consistent with the questions posed by contemplation of personal mortality.

First, it is through technological progress that mankind occupies its daily practice with the purpose of mastering ever-more-perfectly the lawful composition of the universe. *Science*, in the restricted sense of the activity of professional scientists, is the most obvious example of this.

Every teacher who imparts knowledge, every workman who assimilates such knowledge and improves its application, every parent who nurtures the appetite for knowledge in a child, is also an indispensable part of this effort.

Second, by making such progress the important feature of social life in such ways, the struggle for advancement of knowledge imparts a commitment to rationality in the population.

Third, as a population is strengthened in rationality in such a fashion, society becomes more agreeable to imitating the quality of the lawful ordering of the universe in defining for society laws and their implementation by society.

This has further, more profound moral implications.

What is it that a technologically progressing society transmits to future generations?

It cannot be merely specific scientific knowledge. The history of science informs us that the particular knowledge achieved by one generation is waiting to be superseded by a new scientific revolution. What is communicated is those *principles of discovery* which have guided successive scientific revolutions. What is imparted otherwise is an increase in the power of posterity to make greater discoveries than those of preceding generations. *In the end, what is contributed to future generations is a greater development of the powers for knowledge of the average individual.*

These four points outline the moral goal associated with technological progress. Technological progress is the necessary means, the instrument, by which that moral goal is served.

The Role of Culture

The direct connection of cultural progress to economic development is most efficiently illustrated by examining summarily the principal motives for the Golden Renaissance's establishment of the sovereign nation-state as a matter of principle, and by comparing the principles of the sovereign nation-state with the example of music.

During the latter thirteenth century and early fourteenth century, Europe underwent an economic, population, and moral collapse known most commonly as the New Dark Age. Although the principal direct cause for the economic collapse was the successful rise to dominant political power of forces behind the Genoese bankers, the destruction of society through effects of usury would not have been possible but for the degraded moral condition of the people.

This problem was comprehended most effectively, during the midst of this collapse, by Dante Alighieri. His *Commedia* is the indispensable

guide to the statesman to the present time. His attention to the question of development of popular literate languages is the key to understanding why sovereign nation-states must be the institution of self-government of mankind.

The flaw in the order of society outlined by Charlemagne was the use of Latin as the official language of government and science. This arrangement encouraged the degradation of the spoken language of the people into a collection of brutish dialects. Since it is a principle that a people is able to think consciously as it is able to communicate, the brutalization of dialects meant the degradation of the people to a superstitious, irrational force, easily lured into the wicked cults proliferating during the New Dark Age period.

The remedy for this must center around the transformation of collections of local dialects into literate languages, languages enabling a people to receive and impart "profound and impassioned conceptions respecting man and nature" (P. B. Shelley, "In Defence of Poetry"). These literate languages must become the language-basis for self-government of peoples sharing both a common such language and a common sense of moral purpose for the existence of a nation.

Therefore, it is wrong to think of the establishment of the sovereign nation-state and democratic republics in Europe without considering the revolutions in language furthered by writers such as Wycliffe, Dante, Petrarch, Chaucer, Boccaccio, the fifteenth-century Golden Renaissance writers, and deploying of the printing press. Erasmus, Rabelais, Bodin, Cervantes, Shakespeare, and Milton exemplify the emergence of a literate language suited for a people made fit to govern themselves.

Therefore, the term "classical literature" would be usefully limited to those great writings, from Dante through Friedrich Schiller, which have performed a major part in the uplifting of literate languages capable of communicating profound ideas concerning nature and society. The same applies to classical works in architecture, painting, sculpture, and music.

The example of the well-tempered system of musical composition illustrates the connection between classical forms of artistic composition and scientific rationality.

The principle of musical composition has two interconnected aspects. Music is a derivative of poetry, according to principles of metrical composition of poetry known from earlier than the time of Plato. Musical composition is distinguished from poetry in general by the fact that the musical scale is not the sequence of so-called natural intervals—human beings are neither vibrating strings, nor gongs, nor tubes of metal or wood.

This well-tempered system is very ancient, as al-Farabi, the discoverer of the octave scale, reported during the tenth century A.D. It is reducible

to twenty-four major and minor keys. (Archaeological evidence proves that the well-tempered system of Bach et al. was in use in China 3,000 years ago.) The characteristic of the system is that a continuous lawful progression from any one of these keys to any or all others can be achieved through intervals of a fifth and minor third.

The reason the intervals of the musical scale are not (and could not be) the intervals of the so-called natural tones, is elementary and conclusive. In any musical composition in which modulation from one to other keys occurs, the values of the tones of the first key must be the values of the proper or relative tone of the other twenty-three keys. This requirement determines the values of the tones of the musical scale exactly, through a simple geometric projection.

The ordering of any sequence of notes must either be according to lawful sequences in terms of such a well-tempered system, or must be a dissonance which is resolved by means of some lawful development into such a sequence. (The dissonance between C and F-sharp for the key of C-major is paradigmatic.)

Development is achieved with aid of modulational progress, but not by simple modulation alone. There must be nothing arbitrary (irrational) in musical composition. Development is achieved in terms of two characteristic features of musical composition. First, all well-tempered music is either explicitly or implicitly polyphonic. Second, all musical lines are written in time-signatures and according to poetic metrical principles of composition of lines of poetry. It is the sequences of notes occurring not in the same polyphonic voice, usefully called "cross-voice" sequences, which define counterpoint. The metrical characteristics define the interpretation of this counterpoint for the composer.

As Johannes Kepler emphasized, the principles underlying well-tempered musical composition are the same principles ordering the composition of the solar system, with respect both to the planetary orbits and the orbits of the moons of the planets. There is nothing arbitrary, arbitrarily "Western European," in the well-tempered system of al-Farabi, Zarlino, Bach, Mozart, and Beethoven. It is the only possible nonarbitrary (nonirrational) ordering of musical composition ever discovered, and depends upon principles identical with the lawful composition of the solar system.

Although rigorously lawful, the possibilities of development of cross-voice counterpoint under poetic ordering of polyphony are enormous for any selection of thematic reference-material, and virtually unlimited in respect to possibilities of varieties of thematic reference-material. Hence, there is no opposition between lawfulness and creativity in the well-tempered system.

The use of this system of composition declined after Brahms in Europe

and North America, not because the possibilities of development within it had been exhausted in any sense, but because of the loss of the power of musicians to compose under conditions determined by the virtual death of poetry during the latter half of nineteenth-century Europe.

The essential feature of a musical composition is not its repeatable thematic material. The essential feature is the *specific development* involving use of such choices of thematic materials. In other words, thematic material serves a composer as a statement of an implied problem of elaborating a development from that choice of thematic material as a reference-point. (Those who imagine that development is decorative improvisation on a theme are unfamiliar with the rudiments of musical composition.) In other words, a musical composition is identified not by its themes, but by the characteristic development of the composition as a whole. When the problem has been solved, the composer summarizes the musical solution developed, and the composition is complete.

The participation in the performance or hearing of such music celebrates and strengthens the specific powers of the human mind for comprehending such features of the universe as (as Kepler discovered) the lawful composition of the solar system.

The same principles apply to classical architecture. The cathedral builders of Chartres employed Platonic ratios akin to those of music to create the same effect as a musical composition upon the mind of even the illiterate peasant looking upwards. The "Paradise" canticle of Dante Alighieri's *Commedia* anticipates Kepler's solution to the organization of the solar system, among its other uses of the same system of Platonic ratios. The great Golden Renaissance painters, typified by Leonardo da Vinci and Raphael, are influenced by the geometric principles of composition underlying the composition of the solar system and the well-tempered system of musical composition.

Although only specialists may be familiar with such direct connections between classical arts and science, the connection exists. More important, it exists for the mind which may not be conscious of the existence of such a connection. The powers of the mind are celebrated and enriched by such artistic composition.

This complementarity between proper approaches to artistic composition (including architecture) and science (technology) indicates that a people must have the completeness of great science and great art together, as two facets of life governed by common underlying principles.

In projecting the development of what are called developing nations, or in restoring the decaying civilization to the North to moral and economic vitality, this two-sidedness of development must command our policy-making. Without the development of the individual person as a whole being, technological progress itself could not be sustained.

Summary

In the next section of this report, we shall examine the concrete principles of economic development from the reference-point of the interrelated development of agriculture and industry. By putting together the conceptions we have developed so far with those added conceptions of the next section, we shall have identified the comprehensive conceptual basis for defining and guiding the development of regions such as Africa today.

Now, before concluding this section, we summarize the leading points to be carried forward from this section to the next section.

We have shown, first of all, that it is incompetent to perceive "economics" as some kind of specialization limited to a presumed collection of "economic facts." That conclusion follows directly, and without margin for competent rebuttal, from the following exemplary considerations.

The competent conception of economic processes flows originally from a moral principle which is immediately accessible to any sane adolescent or adult in any part of the world, however literate or illiterate. *"To make my mortal individual existence of some value, how do I develop and inform my practice to produce something of benefit for the development of generations to come?"*

That moral vantage-point is the common basis for positive morality, positive law, constitutions of states, for the rigorous development and application of scientific knowledge, and for the guided development of culture to produce and strengthen individuals in the capacity for such matters as law and economic development.

For requirements of most limited reference, we identify that knowledge as consistent with the work of Plato and Dante Alighieri. We identify that knowledge as the essence of Italy's fifteenth-century Golden Renaissance, the science of Kepler and Leibniz, and the reference-point for the mercantilists and Kameralists of the sixteenth through the eighteenth century in locations including Italy, England, France, Spain, Germany, Petrograd, and the United States.

Economic science is therefore to be viewed as an inseparable facet of a science usefully termed *statecraft*. Without the development of the law and of the cultural advancement of a people, economic progress cannot be sustained. Without economic progress, societies are repeatedly plunged into depopulation and toward savagery, their populations losing thus the moral capacity for maintaining law and culture.

We have shown that the proper purpose of such statecraft is the advancement of the individualized power to deploy the lawful principles of composition of the universe in the individual member of posterity. We have shown, that although this development of the individual is a

matter of our human species as a whole, such development is fostered through the development of sovereign nation-state republics, unifying various dialects into a literate language of science and culture, a language directed by a unifying conception of a single moral purpose for that people and its posterity.

Within that context, we have situated the ordering-principles of economic processes as such.

Thus far, in this present section of this report, we have elaborated the ordering-principle in what may be usefully termed *thermodynamic* terms of reference.

We have shifted the notion of the underlying principles of thermodynamics away from the popularized Aristotelian notion of energy, popularized during the course of the nineteenth and twentieth century. We have reaffirmed the principles employed and developed by the discoveries of the principles of modern thermodynamics: most notably Leibniz, the Ecole Polytechnique, and Göttingen's Bernhard Riemann. *Energy*, as that term is commonly used today, is a *metaphysical construct* superimposed on the empirical reality of *work* and *power*. The construct-name *energy* is useful only to the degree that we define that term as a conception pertaining to functional relationships connecting *work* and *power*.

The validity—and necessity—for such a correction is demonstrated from two vantage-points. It is demonstrated by examining the means by which we produce what is termed "energy." It is also demonstrated, to the same general effect, by examining the way in which produced "energy" both effects *work* and increases the *power to perform work*.

Such corrections are indispensable for efficient approaches to economic development, including the development of regions such as Africa today.

We have described the evidence which proves that the movement of things up to the point that no advancement in technology occurs, does not accomplish *net work*. Even a certain amount of technological progress, insofar as it merely offsets the marginal cost-rises associated with depletion of "raw materials," does not result in *new work* done. We therefore classified such combined portions of the effort of society as merely *virtual work*.

However, we noted that the energy-density of virtual work per capita rises *necessarily* relative to the depletion of "raw materials," as "raw materials" are defined for any specific range of technology. Each advancement of technology represents a leap in the energy-density of virtual work per capita.

We distinguished between such *virtual work* and *net work* accomplished. *Net work* we defined as the increase of potential relative population-density through advances in technology.

Therefore, we showed, the state of development of societies is adequately described *thermodynamically* in terms of two parameters: the ratio of *net work* to *virtual work*, and the per capita capacity for *virtual work*.

The most obvious expression of per capita *virtual work* is *capital-intensity* of agriculture or industry. The proper measure of capital-intensity for each case is understood by comparing several alternative ways of defining such capital-intensity. It is expressed in terms of *calories* of energy embodied in productive capital goods or improvements of land, in ratio to the amount of energy represented by the personal consumption of the household of the productive labor associated with the use of that capital. It is expressed in terms of the *true* depreciation or amortization for productive capital improvements, the *true replacement-cost*.

In general, the notion of capital-intensity is analogous to the notion of raising the temperature in Sadi Carnot's treatment of thermodynamic efficiencies. For the chemist, this increase in capital-intensity is analogous to increase of the "reducing power" of a process. It is broadly analogous to the notion of increase of the energy flux density of a process.

Since the existence of society requires an accumulation of net work done over successive generations, the existence of society cannot be defined in terms of a fixed technology of reference. (On these grounds, all "systems-analysis" approaches to economic analysis are intrinsically incompetent.) The economic existence of a state must be defined in terms of a *thermodynamic function*. We denoted that function symbolically by

$$F (W_f/W_s, \bar{W}_s) [\text{negentropy}].$$

In order to prepare the material included in the next section, we now summarize the physical significance of this function, in terms of the limitations to be attached to its use.

In that function, "energy" is defined as a construct for the net work of transformation from a relatively lower to a relatively higher ordering of human practice. The physical interpretation of such a ranking of orderings is the view of human interventions into nature as of a higher order, as the cases of nuclear energy and space exploration illustrate most dramatically.

In other words, increases in the potential relative population-density correlate with advances in the order of human productive and related practice, as the latter advances are interpreted as a physical system, such as a machine. This should not be astonishing, since man's capacity to exist depends in principle on man's improved mastery of the lawful ordering of cause and effect in the universe. It is that necessary

correlation between the two effects which enables mankind to define its advances in rationality through technological progress, as consistent with advances in knowledgeable mastery of the lawful ordering of the universe generally.

It also follows from these considerations that man knows "energy" empirically only in the forms of either *negentropy* or *entropy*. Man knows only either advances to higher qualities of organization, or degeneration into lower qualities of organization. For man, *existence is negentropy*. It can be demonstrated with aid of this insight, that the proper interpretation of the lawful ordering of the universe demands the replacement of the Aristotelian notion of "energy" by the notion of *functional negentropy*, in the same general sense we defined a negentropic function for society.

This argument was already made by Leibniz, proceeding from the approach to notions of *work* and *power* we have employed here. A generalized statement of mathematical physics to the effect proposed by Leibniz was given in summary form to the 1854 habilitation dissertation of Bernhard Riemann, *On the Hypotheses Which Underlie Geometry*. That 1854 statement by Riemann subsumes Riemann's influential 1859 paper on acoustical shock waves. That paper has proven crucial not only for modern aeronautical and rocket design, but for coping with problems on the present frontiers of plasma physics.

The link between the work of Leibniz and Riemann was provided chiefly by the development of a *geometric theory of functions* by the school of Monge and Carnot over the period approximately 1794 to 1825. With the destruction of French science chiefly through the activities of Cauchy, the leading French scientists shifted their advanced work to the German branch of the Leibniz faction, typified by Krelle's journal and Göttingen.

This is not merely an academic curiosity, or a matter of concern for physics specialists. It is the key to demystifying economics.

Although the thermodynamic function we have specified is well-founded and accurate as a thermodynamic statement, it is not by itself an *adequate* statement.

As the meaning of "energy" is freed from the character of a mere metaphysical superstition, only when "energy" is interpreted as a reflection of changes in the order of physical-geometric organization for economics, it is the same in the universe more generally.

In other words, it is indispensable to turn away from the delphic misrepresentations of the work of Kepler et al., as that misrepresentation is encountered in exemplary form in the work of Descartes and Newton. We must return to the standpoint of Kepler as appreciated by Leibniz and the Ecole Polytechnique of Monge and Carnot. The universe is not

constituted according to action-at-a-distance among self-evident particles, or infinitely, arbitrarily divisible particles (Cauchy). Just as the measurement of gravitation is adduced from Kepler's laws, so the work done within the universe is work done in terms of reference to the physical-geometric organization of the universe. In other words, a particular action within the universe is to be interpreted in terms of the lawful principles governing transformations of the order of physical-geometric organization of the universe, just as we have indicated for the case of economic processes.

In economic processes, it is not masses of "energy" which define economic processes—otherwise we could raise the energy level of the Club of Rome's Aurelio Peccei by roasting him.

It is the *organization* of society's efforts which shapes the "energy-flows." The primary shaping of those features of organization is the proportioning of the productive labor of the population, geographically, and in terms of categories such as changing proportions of employment between rural and urban productive occupations. This broader alteration of the organization of society's productive effort includes the organization of "energy-flows" associated with designs of machinery, and with related notions of structure of productive processes.

It is useful to emphasize that the sharpening of a knife is in effect a change in the "flow of energy" with implications for productivity.

In first approximation, the higher energy levels associated with advances in productive technology have the form of higher levels of organization of the social-productive process, both in terms of the division of labor and in the organization of tools and powered tools. It is accurate, and necessary, to interpret advances in technology geometrically as movements from relatively lower to relatively higher physical-geometric orders of organization of society's efforts.

We must not overlook the fact that this social organization is humanity's organized practice upon nature, upon the lawful composition of the universe. For this reason, the leaps in physical geometry represented by advances in levels of technology correlate directly with advances in the physical-geometric order of man's willful alteration of the universe generally.

It is in this practical connection that the thermodynamics of economic processes and thermodynamics of the universe as a whole are unified as one conception.

The methodological standpoint of economic science is consequently as follows.

Our conception of physical geometry, as geometry, is typified by the methods employed by Johannes Kepler to discover the lawful composition of the solar system. The solar orbits were determined correctly by

Kepler *without regard to the masses of the orbiting bodies*. As Kepler elaborated his discovery in detail, the ordering of the orbits of the planets (including the "missing planet" located in the orbit of the asteroids) is determined in proportions consistent with a series of Platonic solids, in a fashion analogous to the generating-principle of the interval of the fifth in music.

The significance of that for teaching of physics to students is that the student must view the work of shifting a body within the solar system as work done *against the laws adduced by Kepler*. It should not be astonishing to us, therefore, that the work of moving such a body in that "gravitational field" is an amount of effort precisely consistent with the values given by Kepler's laws, or to discover from his writings, that Kepler was already knowledgeable of this connection decades before Newton et al.

The method merely exemplified by Kepler's establishment of mathematical physics has the most general and comprehensive application. That is a proper view of the significance of Riemann's 1854 habilitation dissertation. The connection between Kepler and Riemann is directly mediated through Leibniz, Euler, et al. into the geometric physics of Gaspard Monge and Lazare Carnot. Through the work of collaborators of Monge and the two Carnots, including most emphatically Fourier and Legendre, Riemann completed the affirmation of the most comprehensive physics available today. (The details of physics knowledge may have been increased since Riemann, but the general level of our contemporary physics as a technology is predominantly inferior in conception and practice to the level achieved by Riemann.)

It is necessary for the economic scientist to view the connected development from Kepler, through Leibniz, through the Ecole Polytechnique, and Weierstrass, Riemann, and Cantor, as the development of the science of physical topology (as distinct from disembodied "pure topology").

The economist must employ the methodological standpoint of such a notion of physical topology to bring conceptual order into the manifoldness of organizational singularities of the social-productive processes.

A brief illustration of what this signifies:

A cube has six faces defined by *twelve edges* and *eight points*: a total of *twenty* singularities. It might appear purely arbitrary to do so, but it is clear that we can think of a solid of *twenty faces* as the second object in a series for which the cube is the first member. Next, the number of singularities of the twenty-face body can be totaled, and a body of that number of faces is the third element in our seemingly arbitrary series. A number of elements of such a series can be defined.

Continuing with this illustration:

We can now apply the ordinary counting numbers to compile a report on this series of geometric figures. Let us consider the three most obvious kinds of counting-operations to be performed. *First*, we attach ordinal numbers (counting integers) to each of the successive numbers of the series. *Second*, we count the number of faces associated with each counting-number denoting a member of the series. *Third*, we count the combined numbers of edges and points of the figure associated with the counting-number denoting a member of the series.

We can begin a similar series with a four-sided solid figure, the tetrahedron. A whole family of such geometric series can be accumulated in this way. We return to that in a moment. First, let us consider the significance of the relationships among the three series of numbers adduced for our hypothetical case, the series generated in the indicated manner from the starting-point of the cube. Examination of this feature of the given illustration leads us to higher-order generalizations.

The counting-series of numbers denoting successive figures is to be compared with the number of singularities associated with each so-denoted figure. We examine the way in which the number of singularities increases as we progress through elements of the series 1, 2, 3. . . . Let us term this the "density of singularities."

This geometric series then describes a well-ordered pathway of increase of "density of singularities." The *generating principle* governing the generation of that specific series is then to be thought of as a "geometric number," broadly identical with (and in fact coherent with) the notion of "transfinite number" as developed by Georg Cantor.

Any physical process which describes a series of transformations with the same geometric ordering of "density of singularities" would be a process we could identify analytically (mathematically) with that specific "geometric," or "transfinite," number.

Now, return our attention to the fact that a whole range of such geometric series can be developed. Such a series, the one generated in terms of a tetrahedron, another in terms of a cube, and so forth, can be interpreted as a well-ordered series of "geometric numbers." This series is well-ordered on condition that the initial figure used to generate the series is not a duplicate of a figure generated by some other series.

This ordering-principle permits the counting of each member of each specific series in terms of the associated "prime-number" figure (tetrahedron, cube, and so forth). The comparison of the various such series is reduced to a comparison of the patterns of geometric increase of "density of singularities."

The ordering-principle determining the series of series is a higher-order "geometric number" (higher-order "transfinite number").

Further enlargement of the same approach, to broader notions of geometry, yields still-higher orders of such "geometric numbers."

From the standpoint of thermodynamic assessment of the "structural features" of such matters as division of labor, structure of energy-flows through machines, other productive processes, and so forth, these structural distinctions have efficient "geometric properties," strictly analogous to the kinds of problems of analysis subsumed by "geometric numbers."

The simplest case is the now-classic input-output analytical mapping of the goods-production and goods-consumption of a national economy. If this input-output mapping is extended in scope, to map the detailed structure of the "points of production" and their interconnections, the connection between thermodynamics of economic processes and the structural transformation of those processes begins to be clear empirically.

As economies become more productive per capita, they increase the "density of singularities" associated with the necessary structure of the social-productive process. The effort to map such transformations in thermodynamically ranked structural features according to the notion of "geometric numbers" ought therefore to be obvious.

It would be desirable to have detailed structural analysis of economies available to us in that form. At present, such aspects of the economic census are not developed for any national economy. Nonetheless, as we shall emphasize, twofoldly, not only are broad structural features of transformation directly accessible to us presently, but conclusions of the greatest relative usefulness for policy-making follow from looking at those known structural features from the vantage point we have summarily outlined here.

The manner in which geometry and thermodynamics are unified is this:

Let us attribute the indefinite counting-number " n " to any distinguishable quality of structural development of a process. This could be a term in a series. It could be one of the simplest of the kinds of geometric numbers we have indicated here. It could also be, instead of those usages, the higher-order geometric number associated with a well-ordered family of such geometric numbers.

The transformations which are of interest to us in economic processes (or physics generally) are those which represent a structural transformation from any designated value " n ," to the next-higher in a series (" n ," " $n+1$," " $n+2$," " $n+3$," . . .) in which " n " is a generated member. In other words, we refer " n " to the higher-order geometric number which defines " n ," " $n+1$," . . . , as a series.

These transformations we recognize as *relative net work*. We interpret increases in the density of "energy" required as virtual work per capita

\overline{W}_s as correlated with an increase in the "density of singularities." We "measure" the energy of net work done $[F (W_f/W_s, \overline{W}_s)]$ as a "leap" from one member of a geometric-number series to a higher-order member of that series.

An effort to arrive at a delphic interpretation of such empirical matter was popularized during the immediate aftermath of World War II under the rubric of "information theory." The assumptions advanced in the effort to develop a statistical-thermodynamic interpretation of the qualitative phenomena concerning "information" were metaphysical superstition. This falseness, this quality of metaphysical superstition, was axiomatic: it reflected, from the standpoint of formal analysis, the absurdities resulting from an attempt to define on an axiomatically algebraic basis process-phenomena which permit only a physical-geometric analysis. Or, to say the same thing in other words, the metaphysical superstitions associated with "information theory" arose inevitably from the attempt to provide numerical analysis of the phenomena in terms of reference of algebraic methods applied to the variously stated or implied assumption that "energy" is a self-evident (ontologically) particularity.

Once the fact and reasons for such metaphysical superstition among the "information theorists" is recognized, their bungled work has a certain degree of usefulness for us, especially as that bungled approach has imposed its superstitious interpretations of reality on the useful practice of designing control mechanisms, a practice subsuming the deployment of electronic data-processing.

The kinds of superstition associated with "information theorists' " attention to the role of "informational structures," and their physical analogues in advancement of technologies, can be avoided if we recognize that what is called "energy" is a reflection of a positively directed physical-geometric transformation in the structure of processes. We must think of "energy" in Riemannian (Platonic), not "Aristotelian" terms.

Such principles ought to have been clear from the work of such fifteenth-century scientists as Cardinal Nicholas of Cusa and Leonardo da Vinci. The critical, methodological assessment of the work of Archimedes (in particular) by Cusa, and da Vinci's seminal work on ordered transformations of structures (for example, vortices) in hydrodynamics already provide a rigorous basis for adopting the proper approach. It was already implicit in the emphasis Dante Alighieri places upon the physical-geometric ordering of the universe in the "Paradise" canticle of his *Commedia*. It was already outlined by Plato and reflected in the method of Archimedes. After the successful employment of this method by Kepler, there was no legitimate excuse for modern scientists to have drifted into the misdirections typified by Descartes, Newton, Cauchy, and Maxwell.

The failures of European civilization on this point contain the clue of a magnificent opportunity for developing nations, over and above the matters of economic science stressed here. As we shall indicate, this touches upon one of the most crucial of the required policies for successful development.

3.

The Rural-Urban Transformation

The leading feature of successful development of the so-called developing regions is the accomplishment of a shift of ratios of households and labor-force from rural to urban occupations and modes of life. This is accomplished chiefly by the deployment of industrial technology (including improvement of transportation) to transform agriculture from labor-intensive to capital-intensive modes of specialized production of food and fiber. The balanced development of new industrial workplaces, together with appropriate education, to absorb the portions of the population shifting from rural to urban life is the crucial, included aspect of this process.

The most dangerous among the misguided policies recommended to developing nations include:

1. The "appropriate technologies" doctrine promulgated by the World Bank, and by the World Bank's propaganda-arm, the Willy Brandt "North-South Commission." The consequence of this proposal must be genocide through means including famine and epidemic, especially among the least developed nations.
2. The proposal developed by the Brookings Institution, and conducted through Henry Kissinger, UNCTAD, and other channels of subversion, to "solve the problems" of raw materials-exporting nations with cartels modeled on the image of OPEC. This is but the old colonialist policies in a protectionist disguise, leading to the same spread of genocide in developing nations as the "appropriate technologies" evil.
3. Continuations of the "import substitution" policies which the United States and Britain imposed upon Latin America during the postwar period. At best, such ill-advised policies create a better-paid middle-class within developing nations, at the price of increas-

ing the socially dangerous discrepancy between the incomes of a relatively small middle class and the population generally. (Mexico is presently attempting to overcome precisely such disastrous consequences of the imposed "import substitution" policy.)

In due course, we shall make the alternatives to all three such dangerous proposals clear in this report. We begin with elaboration of the leading features of the rural-urban transformation. The significance of the elaboration of *hydrothermodynamics* (*thermodynamics* situated within the terms of physical geometry) in the preceding section will become clearer as we proceed.

It is most useful to examine the case of the development of the United States.

The first, 1790 Census of the United States indicated a rural population of over 90 percent. Today, U.S. farmers, less than 4 percent of the labor-force, have demonstrated the ability not only to produce abundance for the needs of the entire domestic population, but to generate a major export capability as well.

The means by which this successful transformation occurred was outlined as U.S. policy by U.S. Treasury Secretary Alexander Hamilton, in his 1791 *Report to the Congress on the Subject of Manufactures*. Henry C. Carey, President Abraham Lincoln's economic-policy adviser, reexamined the case put by Hamilton a half-century later, richly confirming Hamilton's analysis.

The key to the development of U.S. agriculture was threefold:

1. During the latter part of the eighteenth century, the literacy rate in the United States was in excess of 90 percent, more than double the approximately 40 percent literacy rate then existing in Britain. Contrary to the popularized but false propaganda of Turner and the Anglo-American "revisionist" historians, including Beard, Lippmann, Schlesinger, et al., the American farmer was not a "rough, illiterate frontiersman." He was sometimes called the "Latin farmer" because of the impressive percentage of amateur classical scholars among the farmers as a whole.
2. The development of roads, canals, and later railroads to facilitate marketing of agricultural products, and to promote specialization for market among farmers. This was emphasized to that purpose by Hamilton, and proved a key to the rapid improvement of farm incomes.
3. The development of industry with the understanding that this was uniquely the way in which to increase the productivity and income of agriculture. This was augmented during the nineteenth century

through German influences promoting the use of fertilizers as well as agricultural tools and powered machinery produced by industry.

The typical U.S. farmer or rancher of today operates as an independent farmer on several hundred to several thousand hectares of land. He has a relatively high level of technological competence, relative to technicians employed in industry, and is an independent business executive in the full sense of that term, as well as a self-employed form of productive labor.

This production is not competently interpreted as primarily a connection between the farmer and land. U.S. agriculture is a massive consumer of industrial output for agricultural production: fertilizers, irrigation equipment, pesticides and related items of cost, plus a capital-intensive degree of mechanization of agriculture. This massive purchase of capital goods (equipment and materials of production) by U.S. agriculture is key to the ability of less than 4 percent of the labor-force to produce abundance for the entire labor-force.

The composition of the rural population of the U.S. today should be viewed in the following terms:

1. It should be analyzed in terms of the physical-geometric structural features: (a) the division of labor between rural and urban production; (b) the functional interrelationship between the sectors; (c) the internal structure (as singularities) of agricultural production; (d) the connection of those singularities of agricultural production to the singularities of both industrial suppliers to agriculture and of consumption of agricultural product; and (e) the thermodynamic parameters of these structural relationships.
2. As a paradigm-of-reference for the transformation of the rural-urban ratios of other nations, in the terms of reference indicated by a hydrothermodynamic approach to analysis of such transformations.

To appreciate these connections, we must examine the shifting internal composition of the urban labor-force associated with increasing ratios of urban/rural employment.

Development means not only an increase of the ratio of urban to rural labor-forces. This increase correlates necessarily with a tendency for an increase of the ratio of capital-goods to consumer-goods employment within the urban labor-force. In turn, as the ratio of capital-goods to consumer-goods production increases, there is a necessary expansion in the ratio of scientists and technicians. It is the latter who, in respect to goods production as such, generate the advances in technologies feeding capital-goods development.

It is the advances in technology (and productivity) associated with such interlinked shifts in composition of the labor-force which provide the wellsprings of advances in agricultural technology and productivity, and so forth and so on.

These transformations in labor-force composition and productivity are inseparably dependent upon advances in the quality of education and related cultural development of the labor-force.

These structural transformations of the labor-force's composition correlate with the thermodynamic (negentropic) function $F(W_f/W_s, \bar{W}_s)$.

Analysis of the Economy

We now outline a schematic device for conceptualizing the hydrothermodynamic transformation of an economy. This provides us with the basis for an urgently needed replacement for the Gross Domestic Product procedures of National-Income Analysis employed by the UNO and by most nations presently.

Since the fundamental issue of economic science is the development of the power of a population to produce the material alterations of nature associated with a definite potential relative population-density, the term *productive labor* must be limited to that portion of the total activity of society which is directly consumed in effecting such *material* transformations.

Therefore, we restrict the use of the term *productive* to the production of *useful goods*. We include *transportation*, the conveyor-belt of the economy as a whole, within that designation of *productive*.

The term *useful* is applied to *useful goods* from the vantage point of the concept of *net work done*, as we defined that conception in the preceding section of this report.

There must be a positive correlation between changes in man's practice in changing nature and increases in potential relative population-density. This provides analogs for the "increasing reducing power" of the whole economy's production of goods relative to changes in the state of nature.

Therefore, the exemplars of useful goods are the capital goods (materials, machinery, equipment, and so forth) of agricultural or industrial production of *goods*, and the amount of consumption of produced goods by households needed to provide standards of leisure and consumption consistent with the level of technology of present and immediate-future production in the most advanced industries and agriculture.

In addition to *productive* employment, a society requires certain forms of necessary activities which are *useful, but not productive*.

One example of such useful, nonproductive activities is the work of

teachers. The education of the population is necessary for the development of the *potential* productive powers of labor. However, a society of teachers would not be productive at all *as teachers*. Furthermore, the essential benefit contributed by teachers is wasted for the economy except as the labor-force taught is productively employed.

Naturally, the activity of teachers is reflected in the productive output of goods. It is reflected in the *increase of productivity* of productive labor. Thus, by measuring the useful-goods output of productive labor, we have fully accounted, inclusively, for the indirect contribution of teachers to *current production*. To attempt to count the labor of teachers (for example, value-added component of teachers' income) as an amount in addition to the value of output of goods production, would be a folly of double-counting.

The same is true for the organizational contribution to production by the administrators of enterprises, for scientists, engineers, technicians, physicians, and so forth.

The subject of economy is the increase of the material basis for increases in potential relative population-density through advances in the technology of production of useful goods. It is productive labor which directly, and comprehensively subsumes all of that productive activity. Other forms of useful activity have the development of technology and of the powers of productive labor as their subject.

To confuse that distinction, as the practices of national-income accounting do, generally, today, is to make a mess of everything.

Since the smallest unit of reproduction of a population is the household which produces and nurtures children, the starting point for competent national-income accounting is the *total households* of the nation.

We apportion these total households into two principal categories. In one category we include the households whose labor-force members are employed as productive operatives in agriculture or industry. In the second category, we include other households.

The objection might be raised, that one member of a household may be employed in a productive occupation, while another may be employed in a nonproductive occupation. It might be objected, in the same vein, that a person may change employment from a productive to nonproductive occupation, or the reverse.

From the vantage point of static accounting, this objection might appear to involve a significant difficulty. It is necessary to remind ourselves that the conception of *net work* focuses our attention on *changes in structure*, and the relationship of such changes in structure to values of our negentropic function.

It is required that we count the respective categories of households in a consistent manner, selecting the manner which is consistent with the

object of analytical work. It is *changes in the structure of the labor-force, relative to households*, which is our primary datum. We must measure the households categorically according to the requirement of measuring changes in the composition of the labor-force.

We outline the methods of national income-accounting to be used, illustrating the points to be made by a schematic representation which displays the problem in the simplest possible form.

See, now, *Figure 1*. We describe this figure, and then present, in summary, the key distinctions between our usage of the symbology employed and the use of a similar symbology by Karl Marx.

The diagrammatic scheme of *Figure 1* depicts the flows of "negentropy," chiefly in the form of useful goods, in the reproductive cycle of a national economy. It represents that dynamic process in terms of imagery appropriate to a static form. We have used this imagery, over a period of a decade and a half of university-level instruction in economic science, and have found such a first-approximation scheme to be most satisfactory pedagogically.

The two left-hand bars apportion the total population of households of a national economy into the two general categories of *productive* and *nonproductive*. In this case, the upper of the two bars represents the nonproductive, and the lower the productive households.

We have focused, in this diagram, only on the internal features of the productive population of households.

For purposes of simplification at this point, we have divided the total population of productive households' persons into three age-categories: young, mature persons below the age of retirement from employment as regular productive labor, and persons above that *modal* age of retirement. It is the middle-range which yields productive labor—after deducting for persons engaged in rearing of children and other matters internal to the household itself. This provides a geometric determination of the productive labor-force available.

The bar to the right of the productive households' bar is the production-bar. This bar is analyzed in terms of its goods-output.

The principal categories of goods-output are (a) capital goods (materials, equipment, machinery, and so forth) consumed by production itself; (b) goods consumed by the households of the productive category; (c) a social surplus of goods produced in excess of consumption-requirements for *a* and *b*.

The third category, *social surplus*, is subdivided into two subcategories. The first of these subcategories, labeled "*d*," is the consumer and capital-like goods consumed by the populations and activities of the nonproductive sector of households. The second of these subcategories is *net social surplus*, which we have designated as *S-prime* (*S'*). This is the margin of total output available for *net work* investments.

FIGURE 1 HERE

The dotted-line connection between the two population-bars indicates the transmission of services from the nonproductive to productive sector. The heavy arrowed lines show the flow of goods through the system.

We now discuss the symbology used. After that, before turning to the question of methods of analysis, we shall interpolate summary remarks identifying the essential distinctions between our employment of this symbology and that of Karl Marx.

The symbology used for the productive relations depicted is:

- C Capital-goods consumption by production itself.
- V Goods consumed by households of productive labor.
- S Social surplus (total).
- d Nonproductive consumption.
- S' Net social surplus.
- $|S' = (S - d)|$

The key national-income accounting-ratios derived from this symbology are:

- $S/(C+V)$ Productivity.
- $C/(C+V)$ Capital-intensity.
- $S'/(C+V)$ Rate of profit.

and, for additional reference:

- $d/(C+V)$ Expense-ratio.

It is the changes in these ratios effected over the course of successive epochs of the production-consumption cycle which are the primary objectives of economic analysis.

These ratios are the *social ratios* of the economy, which must be correlated with the negentropic function.

To this purpose, we achieve a useful first approximation of the desired form of analysis by defining "economic" space as follows.

The three independent parameters of this *economic space* of reference are: (a) $S'/(C+V)$; (b) $C/(C+V)$; and (c) \bar{W}_s . This is not a fully adequate definition, for reasons we shall indicate below. However, it provides a method for effecting useful approximations by administrators and economists generally, and has pedagogical importance, as a stepping-stone toward the more adequate notions required.

By defining "economic space" in these terms of reference, the subspace formed by $S'/(C+V)$ and \bar{W}_s approximates the functional term W_f/W_s . The subspace formed by $C/(C+V)$ and \bar{W}_s defines the indicated energy flux density of capital-intensity, approximating the required elaborated

(social) form of expression for \bar{W}_s . So, the "economic space" defined by these three approximates the cross-sectional values for a short interval of development of the function $F(W_f/W_s, \bar{W}_s)$.

By means of enriched treatment of the schema, to account for the interactive subcategories of productive employment (agriculture, forestry, fishing, mining, manufacture of capital goods, manufacture of consumer goods, energy production, etc.), and subdividing those subcategories in terms of types of industries, our analysis converges upon the degrees of successive refinement required.

For example, for use of more limited computer facilities, useful approximations for treatment of certain kinds of analytical tasks can be accomplished in treating each category of industry in an economy as contributing its output through a pipeline-like connection to the general common pipeline of total output.

That approximation breaks down if we explore the analytical problems more deeply. In practice, we must allocate among all the industries according to the indicated resulting improvement for the performance of the economy as a whole in terms of the function we have described.

The Case of Karl Marx

Marx is situated between the British East India Company propagandists and the continental mercantilists-Kameralists in chiefly a twofold way.

Marx is essentially what he defines himself to be in political economy. He is a continuation of the "rationalist" phase of the British East India Company propagandists, most emphatically Adam Smith and David Ricardo.

Without otherwise changing any of the axiomatic assumptions of the British school to which he adhered, Marx effected several relatively important improvements of British political economy within that limiting set of conditions. Central, of course, is Marx's application of the notion of *labor-power*.

Contrary to the lying Friedrich Engels, Marx was by no means the discoverer of "labor-power." The discovery was made, and in a richer and more rigorous form than Marx's writings ever suggest, by Leibniz during no later than the 1670s. Moreover, Leibniz's conception of the "productive powers of labor" was incorporated as the national policy of the United States during the first administration of President George Washington, as the central feature of Hamilton's *Report on the Subject of Manufactures*. This same conception was central to the work of economists associated with the Ecole Polytechnique, including Chaptal and Dupin. It was popularized throughout leading German circles before

Marx's youth by the Leibnizian Kameralists and by leading figures such as Friedrich List.

On this point, Marx's libelous mistreatment of List and Carey (both at the prompting of Engels) is the most naked instance of willful intellectual dishonesty by Marx. Not only did he exhibit acquaintance with the writings of both List and Carey, but did so by publishing fraudulent attacks upon them while otherwise borrowing from the work of both.

Although Marx employed the conception of labor-power in a delphic, borrowed form, he was a dedicated anglophile in philosophy, science, and political economy; at least, anglophile relative to the principal differences between British and continental scientific thinkers. Correspondingly, he situated his limited use of the borrowed notion of "labor-power" within the axiomatic setting defined by the works of Smith and Ricardo.

Marx succeeded in his four-volume *Capital* in proving conclusively that the British model of political economy is inherently subject to Malthusian, antitechnological-progress tendencies, and to periodic monetary-crisis breakdowns. Insofar as he correctly insisted upon technological progress as a matter of fundamental human-species interest, he relegated that hope to an anticapitalist society in the well-known fashion.

This inner contradiction within Marx the political economist extends into matters outside political economy as Marx defined it. Correspondingly, today, as the Socialist International leads in promoting neo-Malthusianism, members and co-thinkers of that Socialist International deplore what some of them describe as the "Platonic impulse" in Marx's work. They propose a "Marxism" stripped of all taint of such "Platonism."

The accusation of a "taint of Platonism" in Marx is valid. This shows in one of the earliest of the surviving literary works of Marx, an 1835 school essay written as an examination exercise under the direction of Johann Hugo Wyttenbach at Trier. It shows prominently in several locations, including Marx's contribution to the 1846 manuscript *The German Ideology*, and in the treatment of the subject of the interrelationship between "freedom" and "necessity" in Section VII of *Capital*, III.

Those qualifications noted, in all other respects, Marx's political economy is thoroughly and predominantly a variation within the bounds of the British East India Company school.

This observation applies to Marx's usage of the symbolologies for *C*, *V*, *S*, and "*d*" (which he defines differently than we do, and terms "capitalists' consumption"). Although the British political economists of the "rationalist" phase pretend to be the originators of political economy, they came into this field relatively later, long after Plethon had intro-

duced formal political economy into Western Europe during the early fifteenth century, and after the seminal work of the mercantilists and Kameralists, including Jean Bodin, Serra, Becher, Leibniz, and Alexander Hamilton had been well established and widely circulated. Hence, the origin of the categories for *C*, *V*, *S*, and *d* in British "rationalist" political economists is British delphic plagiarism.

The British borrowed extensively from such sources. After borrowing, the British not only pretended to have invented such conceptions themselves. The British used the adopted authority of having made such discoveries, to attribute to those conceptions a meaning entirely different than those from which they borrowed.

This is the classical *delphic* method. That is the term used to describe this method of fraud in memory of the Cult of Apollo at Delphi. Sometimes professed as a method by Jesuit spokesmen, the "delphic method" was otherwise known in ancient Greece as the method of sophistry. Through the activities of the school of rhetoric of Isocrates at Athens, the terms sophist and rhetorician came to have the same connotations.

The opening of the chest of private working-papers of Isaac Newton, by John M. Keynes and others after him, contributed powerful circumstantial corroboration of the otherwise well-documented evidence that Isaac Newton, like his accomplice Boyle, was a swindling plagiarist of this delphic variety. Newton and Boyle plagiarized liberally from Hooke, as well as from Huyghens and Leibniz. In Hooke's case, Newton and Boyle took over whole chunks of Hooke's written work with scarcely any philosophical alteration. In the case of philosophical opponents, such as Huyghens and Leibniz, the delphic method was used. The bare form of a conception was plagiarized, and then the discovery of the conception so plagiarized was attributed to a philosophical method directly opposite to that through which the plagiarized discovery had actually been effected. The chest of Newton's papers indicated that Newton had been fully occupied in the attempt to practice primitive black magic all during the period he pretended to be occupied with scientific investigations.

The economic categories which Marx adopted from the hands of his British political-economist predecessors were original neither to Marx nor those British predecessors. They were transmitted to Marx as delphic distortions of the scientific conceptions earlier developed by the mercantilists and Kameralists of the sixteenth through eighteenth centuries.

Although there are points of agreement in definition of empirical data between our own and Marx's description of some parts of these categories, that is the only point of agreement. The attempt to interpret these terms from a Marxist vantage point must inherently lead to disaster. As for the argument that the case of Soviet development seems

to indicate otherwise, the fact of the matter is that Soviet development is chiefly V. I. Lenin's effort to adopt American methods and German technology for ordering of the nationalist (noncapitalist) economic development of that nation.

Illustration: Population Policy

We shall now develop a series of examples, to illustrate the kinds of conceptual approaches to developmental policies this method implies. These examples will include, but not be limited to, refutations of the three dangerous policy-proposals cited at the outset of this section of our report: "appropriate technologies," "raw materials cartelization," and "import substitution."

We begin now with a treatment of exemplary features of population policy.

The advancement of technology in the OECD nations has raised the modal school-leaving age of employable labor to between seventeen and twenty-five years—with only a small ratio of exceptions for this (such as physicians). We would argue, and strenuously, that the quality of education provided is poor, and has become increasingly worse over the course of the past two decades of "educational reforms." We ourselves would insist that in most instances students fail to learn adequately in universities what they should have mastered in properly reformed secondary schools. Nonetheless, once such criticisms have been duly noted, the fact remains: advances in technology do raise the school-leaving age for new members of a qualified labor-force.

In the case of the United States, it is useful to compare the educational requirements of the industrial labor-force at the beginning of the century with requirements of the immediate postwar period. At the beginning of the century, basic preskills requirements for members of the main body of the industrial labor-force were satisfied by approximately a grammar-school level of education. By the postwar period, for aerospace and related levels of industrial technology, the functional equivalent (in combined education and experience) of one or two years of technical education above the secondary-school level was required.

The portion of the population of households represented by persons at a pre-labor-force age-level is a definable percentage of the entire population of those households. The increase of this percentage increases the social cost to adult labor-force members of households, in providing the maintenance and education of the young over an extended period.

In addition, the advances in technology which correlate with increases of the school-leaving age are associated with actual or imputed increases

in \bar{W}_s . This increase is expressed as an increased cost per individual member of society.

These considerations make it increasingly intolerable to tolerate high death rates. It becomes necessary to increase the average span of the productive lifetimes of adult members of the labor force. Life-expectancies typical for poorer sections of the populations of developing nations, and for most of Africa, are intolerably low.

Part of the increase in value of \bar{W}_s is a reflection of the increased nutritional quality, hygiene, and health-care requirements associated with increases in mean longevity. The largest increments of cost associated with such improvements are for improved nutrition and sanitation.

Health care is a high-technology, predominantly labor-intensive service. The average age of specialist physicians completing residencies defines the limited number of years of practice of the trained specialist. For delivery of health care, there must be an increasing ratio of total physicians per specialist physician, and increasing ratios of biological scientists, technicians per active physician, as well as required ratios of nurses, paramedical employees, and nonmedical logistical support for hospitals, clinics, and other institutions of medical practice. The costs of maintaining adequate training facilities and programs for producing such physicians and other specialists of health-care work is a very considerable part of the total cost of health-care services.

In general, the principal frontier of medicine is conquest of illnesses which are, directly or otherwise, characteristically diseases of aging.

For example, if rates for cancer are properly constructed, the rate of incidence of cancer in the United States has been declining. Cancer is predominantly a disease of aging. Therefore, as longevity increases in a population, as it has in the United States, more persons live to the age at which contraction of cancer is probable. So, the incidence of cancer in populations must be measured not per member of the population, but for the population of each age-interval. By such standards, the incidence of cancer has declined, and the death rate from cancer has declined more significantly.

From the standpoint of economics, the physician treating one patient is implicitly treating the entire population. By combatting disease or injury in the person to which this occurs, the medical profession is mastering the disease or injury, by fighting it from case to case. The knowledge gained by fighting a disease such as cancer, often at a high cost per individual treated, leads toward development of methods and procedures by which the disease is ultimately mastered, and at a relatively low cost per member of the total population threatened by such disease.

From a broader view of this same aspect of medical practice, the combat against diseases associated with aging is, taken in totality, an

integral part of the process of comprehending and treating those processes of aging of tissues which are direct or implicit causes for the termination of life or impairment of capabilities at age levels of, for purposes of reference, eighty-five to ninety years.

If we could master the problems of aging more adequately, this would raise the age level for full physical productive competence. The power to accomplish this would be of no trivial economic importance for nations such as the United States today. It would also be of great moral importance in several ways. No moral person can accept as tolerable reduced quality or capacity in the aging, or condemnation of a retired person to contemplation either of an early death or a decade or so of an imposed sense of social uselessness, under the kinds of social policies presently prevailing in a number of nations including the United States.

Some of those cited considerations may appear to be luxuries beyond realistic concerns for the present state of most of the African continent. The fact remains, the development of the economy of Africa demands a substantial increase in the mean longevity of the African population. Without increased longevity, we cannot support the levels of education and leisure required by modern technology.

Directly contrary to the Club of Rome and its accomplices, a relatively high birth rate is a precondition for rapid rates of economic development.

Our included concern for the development of Africa must be to shift rapidly the average composition of skill levels in the labor-force as a whole. This is best accomplished by development over two successive generations of proportionately large infusions of young, relatively well-educated Africans into the labor-force.

This assumes that we provide the nutrition, sanitation, and educational programs needed to accomplish that, and that we provide the productive workplaces needed to absorb such increments to the labor-force according to those acquired skill levels.

Not only is such an infusion of educated youth the key to increasing in a major way the mean productivity of the labor-forces of African nations. It has been demonstrated repeatedly that advancement of the cultural levels of matured generations is best accomplished through the effects on those generations of education of the children and youth.

This point implies, and properly so, that the development of Africa must be directed to what the nations of Africa are to become in such target-years as 2000 and 2020. Everything should be focused on attempting to achieve an approximation of economic break-even of income and costs of development now, with development directed to preparing for the infusion of young, educated members of the labor-force added during and between the signal years of A.D. 2000 and 2020. The conception needed is one of *development of the productive powers of an entire population over a development-period spanning two generations.*

"Forty Years of the Child" would be one useful thematic name for what must be accomplished.

Longevity and education should be prominent themes of key improvements in social policy over the span of this indicated period.

This, it should be obvious enough, is implicit in the application of the notion of increasing the potential relative population-density to the structural features of the social process before us.

Illustration: "Appropriate Technologies"

The doctrine of "appropriate technologies" associated with proposals of the World Bank and Brandt "North-South Commission" are clearly proposals for genocide.

In the case of numerous backers of that policy, as of the Carter administration's "Global 2000" dogma, the intent to cause genocide is fully conscious, and a more fully conscious commitment to genocide than was proven at Nuremberg respecting Nazi wartime policies in occupied zones of Europe. The deaths which those strata intend to effect by such methods of famine, epidemic, and homicidal social chaos (regional wars, etc.) range in projections from hundreds of millions to literal billions—over the course of the coming two decades.

There should be no pretending that the ultimate authors of the Club of Rome and allied population-policies are not among the most evil creatures ever to attain positions of great influence in the policies of nations. By the standards of Nuremberg, many of those should be tried and hanged now—before the mass murder is actually accomplished.

There are others who support such wicked policies of genocide out of what might be described as "moral indifference." They are aware that the *accelerated deaths* of billions is the willful intent of "appropriate technologies" and related policies. Yet, the best estimate we can offer from the extensive interviews with such persons over a period of about eight years to date, is that they reconcile themselves to supporting such genocidal policies, by refusing to face the reality that those to be murdered are not population-statistics, but actually individual human beings. This sort of person says of the genocidal implications: "Unpleasant, but perhaps unavoidable."

There are others who hysterically refuse to face the genocidal implications of these policies. They refuse to make conscious, or to permit others to cause them to become conscious, that reducing the caloric daily intake to less than 1,200 or even less than 1,000 calories per person creates the circumstances under which the slightest trauma triggers famine, epidemic, and homicidal forms of social chaos.

Most of black Africa heads the list of populations to be wiped out by genocidal means over the coming two decades.

In the effort to be clever, in a manner typical of the British leading strata, the forces behind this genocide prefer to dupe peoples of former colonial regions to adopt the policies which create the preconditions for famine and epidemic. The adoption of a "soft" approach by the Brandt "North-South Commission" is typical of, and leading among such British-style tricks. The function of the trick is obvious enough: to avoid the political reactions, within the metropolitan populations themselves, which would be triggered by stalwart African denunciation of such tricks as outright genocide. In fact, the policy-makers supporting genocide within governmental agencies of the United States and other nations, have been privately explicit on this point. They fear, most of all, the eruption of revulsion against such evil policies from among the still-moral, but poorly informed majority of the electorates of the metropolitan nations.

The intensification of labor-intensive agriculture, the principal feature (in fact) of the "appropriate technologies" proposal, means the rapid devolution of the fertility of the land more intensively exploited by these means. This is coupled with the fact that present average levels of productivity in the least-developed nations are already at the verge of conditions for spreading famine and epidemic.

If British varieties of political-economic superstitions had not corrupted the world's economists so widely, the genocidal implications of the Brandt Commission's proposals would have been recognized immediately by all statesmen—and the ropes of Nuremberg would have been hung out in anticipation of the results of proceedings against the wicked perpetrators of such monstrous proposals. The type of analytical problem posed by this issue of policy is among the most basic topics of a properly conceived introductory course in economic science.

That analytical problem ought to be regarded as a classical illustration of the interconnection between the thermodynamic and hydrodynamic facets of economic processes. We focus attention on the hydrodynamic facet first.

The first rule-of-thumb measure of the degree of economic development of a state is the ratio of urban to rural productive occupations. This is conditional, of course, on the assumption that a high proportion of the potential labor-force is employed, and on the further assumption that nonproductive forces of employment are predominantly of a necessary and useful form. (Worse than an excess of such parasites as pimps, prostitutes, and croupiers, is the sufferance of such evil professions as sociology or the Tavistock variety of brainwashing behavioral psychologist. Such latter, together with kindred species of anthropolo-

conducted as policy-intent, under such rubrics as the "Cultural Revolution," are exemplary of this connection, as is the reflection of bloody intramural fights within the ranks of secret societies (in existence since the Han dynasty) in the so-called Gang of Four trial recently.

The promotion of infanticide as official policy of the Peking regime today is viewed, and properly so, as variously a resurrection and perpetuation of the recurring infanticide endemic to mandarin society over preceding centuries. On the one side, the Peking regime's ideologically motivated determination to keep the labor-intensive rural population overwhelmingly predominant, presumably to curb the rationalist, "New China" influences of urban culture, produces conditions under which the nation is unable to sustain its population—because of its low potential relative population-density. This defines the economic preconditions for the current practice of systematic mass-scale murder in China. The mass murder so conducted coincides with recurring episodes of depopulation endemic to the mandarin order—the same mandarin order whose continued influence, through peasant-oriented secret-society agent Mao Tse-tung et al., created the recurrence of these conditions.

These past China conditions did not have to come into being again. If the urban-industrial development had been encouraged, this would not have occurred. However, the mandarin ("Old China") factions rightly view industrial-urban development as strengthening the social basis for "New China" philosophical world-outlooks. So, Peking has vacillated between its perceived as unavoidable needs to have modern technology at its disposal, and its concern to limit and contain the development of a social base expressing the characteristic antimandarin rationality of urban-industrial development. The outcome of the successful containment of the "New China" forces by the "Old China" forces has been the overtaking of China's potential relative population-density by the requirements of its predominantly labor-intensive rural population.

If we compare the limited, and relatively backward industrial base of China with its labor-intensive rural base, we find illustrated more or less exactly the logic of the Brandt Commission's proposals.

Although the industrial base of China is numerically large in terms of labor-force, by modern standards it is a relatively small percentage of the total population. The imposition of appropriate-technologies dogmas upon the developing nations generally, under conditions of metropolitan nations' becoming "formerly industrialized" powers such as Great Britain today, creates a situation between North and South analogous to the situation between the urban and the labor-intensive-rural sectors of China.

The bare hydrodynamics of the developmental process emphasizes the shifting of the social composition of the labor-force to higher states of

gists, have proven to be among the most poisonous influences developing nations have imported from metropolitan countries.)

This rule of thumb is properly refined by considering the correlation of the urban-rural ratio with the ratios for capital-goods to consumer-goods employment within the urban sector. This is refined further by shifting from a static to dynamic view of those same and related social ratios. It is the rate of increase of urban relative to rural productive employment, combined with the rate of increase of productive employment of capital-goods over consumer-goods subsectors, on which attention must be focused.

It is not only a historical fact, but a necessary condition of economic development, that as any sector becomes relatively small, significant progressive shifts in employment emphasize the relatively more populous subsectors of the division of labor.

In respect to agriculture itself, the validity of the ratios depends upon the production of an adequate and improving nutrition for the population as a whole.

(For the moment, we leave out of consideration the special case of an industrialized nation which purchases its food chiefly as imports through export of corresponding values of industrial goods.)

By these indicated standards, the conspicuous nation with the worst policies today is the People's Republic of China. In terms of rough measures of social ratios, China is one-twentieth as developed as the United States. Worse, the persistence of high ratios of marginal grades of rural employment has been aggravated by policies such as the "Great Leap Forward" and "Cultural Revolution." The consequence of such efforts to maintain the social basis for continuation of the ancient mandarin order of rule by secret societies, is the adoption of policies of genocide as operational policy of the government of that wretched nation.

It is documented, for example, that the genocide perpetrated in Kampuchea by the regime of Pol Pot was conducted under direction of Peking advisers, according to policies for genocidal depopulation of Southeast Asia elaborated by the Peking regime. According to U.S. diplomatic-intelligence and corroborating sources, systematic mass murder on a massive scale is currently an operational internal policy of the Peking regime. This policy is corroborated inclusively by official Peking channels.

The People's Republic of China is economically backward not only in social ratios of development. The degree of this backwardness is a consequence of an intent to keep that nation in such rural backwardness, on behalf of maintaining the characteristic social base for mandarin ideology in that nation. The irrationalism and effective de-urbanization

organization: shifts from rural to urban productive occupations; shifts within urban productive employment from consumer-goods to capital-goods production; and emergence of increasing ratios of scientists, engineers, etc., in correlation with an increase of the proportional capital-goods component of urban production.

It is in the process of transformation from relatively lower to relatively higher states of organization of the social division of labor, that thermodynamics manifests itself. In social terms, the increase of capital-intensity associated with negentropic shifts in structure is represented by $C/(C+V)$, and the work-correlative of this increase in \bar{W}_s . The flow of produced goods to effect the increase in capital-intensity of production is reflected in the social ratio $S'/(C+V)$, which correlates with W_f/W_s .

Reduced to barest terms, the possibility of shifting the ratios depends upon the average productivity of the economy (labor-force) as a whole. The possibility of a shift from rural to urban occupations depends upon increasing agricultural productivity per hectare and per capita, to the effect that the total production of nutrition and fiber increases, while the percentage of the labor-force required to produce this increasing amount and quality shrinks.

This latter means irrigation, soil treatment, fertilization, disease control, and mechanization.

It is a dangerous illusion to imagine that any increase in agricultural output could be *sustained* by labor-intensive modes.

The case of Brazil is paradigmatic.

To contain the economic development of Brazil, Brazil's international bankers imposed upon that nation the burning of forests (as a substitute for import and development of fossil and nuclear fuels), and the added program of labor-intensive forms of Amazon agricultural development. Tens of thousands of square miles of Amazon rain forest were stripped annually under these programs.

The attempt to produce repeated crops in deforested rain-forest soil means the transformation of the soil into untillable laterite or similar effects. The lessons of slash-and-burn methods in African rain-forest regions reflect the fact that no sustained tilling of such soil over successive years can be accomplished by labor-intensive methods. The destruction of ancient civilizations in Kampuchea, through transformation of rain-forest areas into laterite by such practices, ought to be classical.

This is an illustration of the notion of the relative population-density associated with a level of development of practice of technology. The existing limitations of land cultivation in Africa by what some wish to term "traditional" methods are expressed by the limits of population implicit in the potentially sustainable exploitation of available areas by such methods. To attempt to force an increase in production without

advanced technologies of production, means to produce effects like those in the cited Brazil or ancient Kampuchea case.

The effects of an "appropriate technologies" policy can be catastrophic in other kinds of side effects.

Stable weather systems are positioned through interaction of global atmospheric systems with columns of moisture from vapor emission of plants. The stripping of vast areas of rain forest in Brazil reduced significantly the rate of vapor emission, from the high rates of forest trees, to the lower rates of crops, brush, and grasses. In a similar fashion, the deforestation of large regions of India raised the mean temperature. The result of "appropriate technologies" practices in the Brazil rain-forest region, was to cause the shift of the Amazon High into the Atlantic—with catastrophic, chain-reaction consequences for the global weather system.

In Africa, a relatively short period of intensified overgrazing and related practices in the Sahel region, produced a shift in weather and rainfall patterns, causing the desertification of a region which, if developed with aid of modern technology, could be the cereal-producing region for hungry Africa.

The development of the biosphere reflects the same laws of the universe we encounter in different form in the development of society. The positive evolutionary development of the biosphere has a long-term functional characteristic of the form $F(W_f/W_s, \bar{W}_s)$. If we degrade the biosphere, the net work which can be extracted from it for human use is reduced. To extract more useful work from the biosphere, we must raise its negentropic level.

To raise the level of the biosphere means two things. It means a more efficient consumption of sunlight, by increasing the conversion of sunlight into biomass. We accomplish this with aid of "artificial energy" added to the production of biomass. This takes the form of irrigation, of replenishment of trace-elements in soil, by other measures of soil treatment, by addition of "energy" in the form of fertilizers, and also by use of "energy" in the form of mechanization to reduce the social cost of measures needed to care for the flourishing of biomass.

In biomass evolution, as in social development, the notion of net work done is inseparable from the notion of transformations of the physical geometry of biological processes. For example, in the animal cell, it is well-known that the ratio of potassium to sodium ions is crucial for determining "energy functions" of the cell, and for resisting aging of tissues. An excessive consumption of sodium salts is a killer, and a deficiency of potassium is also a killer. The biochemical processes are a structuring of "energy-flows." More accurately, what we interpret as energy-flows are in reality matters of *virtual work* and *net work done* in terms of the progression from relatively lower to relatively higher

qualities of physical-geometric organization. It is by adding the proper *singularities* (degrees of freedom) to the biological processes of agriculture, that we increase the potential relative population-density of an average square mile of land in terms of nutritional potentials.

The labor-intensive cultivation of land on extended scales, among the proposals included in the "appropriate technologies" dogma of the Brandt Commission, means a stripping of the soil of mineral and other essential qualities, together with a lowering of the levels of biomass in newly cultivated areas. The best estimate of the results, based on studies of various large-scale areas for which such extension of labor-intensive agriculture has been proposed, is that an ecological collapse of such projects must occur in a relatively short time—a few seasons. This knowledge is widespread among agronomists and related categories of biological-science specialists—so that we are obliged to report that any Brandt Commission defender who denies such facts is either an incompetent or a liar.

Illustration: Raw Materials Cartels

It was argued by the Club of Rome, with aid of a willfully fraudulent *Limits to Growth* report, that the world's "finite essential raw materials" were soon to be exhausted. Refutation of the fraud perpetrated by two neo-Malthusian hoaxsters from Massachusetts Institute of Technology, Meadows and Forrester, leads one to a correct understanding of the genocidal implications for developing nations of the proposal to create raw materials cartels modeled upon OPEC.

There is no *absolute* shortage of raw materials. A cubic mile of the average crust of the earth's surface contains a major portion of all of the raw materials required by mankind as a whole for one year. Each year, through using up of produced things, we turn back a mass of raw materials to earth in the form of waste.

In principle, the human species is presently at the level of new technologies through which we are capable of efficiently extracting the scarcest varieties of raw materials. Such a method is named *isotope separation*. In principle, by merely fostering the continued development of the full range of nuclear technologies and related matters of plasma physics, during the course of the next century, mankind will be enabled to actually process a "cubic mile of earth" *economically*.

The apparent shortages of raw materials, apparently existent or apparently threatened over the decades ahead, are simply matters of *cost*.

The limitations on exploiting raw materials defined by cost are made efficient for society in the following general manner.

If we increase the cost of exploiting raw materials, this increases costs associated with C , thus reducing S' . At a certain point, such increases in C cause S' to become negative in value. Thus, we then have $-[S'/(C+V)]$, and negative values for the characteristic function $F(W_f/W_s, \bar{W}_s)$.

This means a devolution of society (entropy), and a lowering of the potential relative population-density. As this potential falls below the level of existing relative population-density, degenerative processes not only reduce the population (famine, epidemic, and so forth), but impel the population toward some parody of primitive savagery.

This has occurred, in fact, numerous times in the existence of mankind.

During the reign of Charlemagne's contemporary, Caliph Harun al-Rashid, the region known today as Iraq sustained a population in excess of 30 million, compared with approximately 10 million today. This collapse of population levels was caused chiefly by a process of devolution set into motion with the rise of Asharism over the course of the tenth and eleventh centuries A.D. This was a phenomenon of book burning and general reversal of technological progress, analogous to what has occurred under Khomeini in Iran, under Pol Pot in Kampuchea, and is emerging as a trend in Nicaragua under Tomas Borge at this time. The Mongols, steered in the Middle East by the Venetian oligarchy's intelligence service, merely completed the destruction of a culture already plunged deeply into self-imposed technological and moral decay.

This is comparable to the combined effects of Genoese usury and the Khomeini-like cultisms which plunged fourteenth-century Europe into a New Dark Age. Although the Black Death reduced by one-third the population existing at the beginning of its onslaught during that century, this was merely the concluding phase of epidemic of a century-long process of halving the size of the population which began with the defeat of the Hohenstaufen in A.D. 1268. France, for example, did not reach early thirteenth-century levels of population again until the eighteenth century.

This example should be stressed, since the political conditions of Europe during the fourteenth-century New Dark Age were adopted as a model by John Ruskin's Pre-Raphaelite Brotherhood during the nineteenth century. The systematic depopulation of black Africa was first proposed by Ruskin's famous Cecil Rhodes, and has been the continuous policy-perspective of that faction of the British oligarchy, including H. G. Wells, Bertrand Russell, the London Tavistock Institute, and the world federalists, down to the present date. The neo-Malthusian world-federalist faction behind such associations as the Club of Rome, World Wildlife Fund, Aspen Institute, and the international "environmentalist" movement generally, includes that British faction of Ruskin's

political heirs as a leading component. The Brandt Commission is essentially a mere propaganda-arm of those forces.

The Western Hemisphere's so-called pre-Columbian period is one of the clearest demonstrations of such catastrophes.

It is clear from economic analysis of the ruins of ancient Mayan cities and related evidence, that a profound catastrophe collapsed the level of civilization in key parts of the Western Hemisphere during the course of the first millennium B.C. Although there were periods of reconsolidation of society subsequent to the first-millennium B.C. collapse, the general trend of culture in the Western Hemisphere was downward over the two millennia between the onset of the collapse and Columbus's arrival.

Among the indigenous populations of North America, there was a higher level of culture (and population) some centuries prior to the sixteenth century, than was encountered in America by Europeans of the sixteenth, seventeenth, and eighteenth centuries. The cultures encountered were in no sense *primitive* cultures, but were rather the results of a degeneration of peoples into savagery, from a preceding, higher level of culture.

Africa is a largely unwritten archaeological and philological record of such traumatic devolutions. There are probably few, if any, cultures classed as *primitive* by Europeans during the period from the fifteenth century onward which were in fact *primitive* in the strict sense of that term.

In the lesser aspect of such factual evidence, this shows that most efforts at civilization have collapsed, and with those collapses has come a spiral of depopulation and descent toward savagery. That fact is a subject for extended scientific inquiry in its own right. The point to be stressed here in that connection is the lesson that such collapses of entire civilizations, including the present global civilization, are entirely within the reach of possibility.

The reasons for such collapses in known cases are consistently of two principal kinds.

In cases such as the cited example of the ancient Kampuchean culture, the looting of the rain-forest area by labor-intensive methods turned the soil into laterite, and the civilization collapsed accordingly. The fixing of the level of technology, as typified in an evil form of such policies by the Brandt Commission's "appropriate technologies" policy, must always lead toward a genocidal collapse of the economy.

The other cause for known cases of such collapse is typified by the ruinous effects of Asharism upon the civilization of the Arab Renaissance, and by analogous cases such as Khomeinism in Iran, Pol Pot in Kampuchea, and the role of cultism in destroying Europe during the latter thirteenth and fourteenth centuries. Today, the "flagellants" destroying European culture from within are the "environmentalists"

and the associated spread of the irrationalist rock-drug counterculture, the so-called alternative culture.

Contrary to those who wishfully avow thermonuclear war or an induced global biological catastrophe to be "unthinkable," and therefore improbable to a point of virtual certainty, mankind has repeatedly demonstrated his capacity to destroy himself, to effect the self-destruction of entire civilizations. The fact that society today tolerates the Club of Rome and allied forces, and that leading nations consent to policies—such as "IMF conditionalities"—which accomplish the Club of Rome's genocidal purposes, is adequate evidence that only a major effort *directed against these forces* will prevent civilization—and perhaps even the possibility of future human existence on earth—from destroying itself during the immediate period ahead of us.

As early as the late 1960s, leading policy-making influences behind the neo-Malthusian effort of that period defined the curtailing of fresh-water development and of energy supplies as the most efficient preconditions for effecting genocide on a global scale. For that reason, President Carter curtailed water projects inside the United States. For that reason, the development of nuclear energy was sabotaged, to ensure global dependency on fossil-fuel supplies, whose production and/or distribution was under the marketing control of the same complex of London-centered financial forces controlling the London-based "Seven Sisters" of world petroleum marketing.

These forces rigged the 1973-1974 petroleum crisis, and were directing hands behind the 1979 increase in OPEC and other petroleum prices. These price increases, combined with London and Bank for International Settlements-coordinated monetary policies, effected a collapse of world trade and production levels of both industry and agriculture. In consequence of these devolutionary effects, there is a growing glut in world petroleum supplies, even at sharply reduced levels of OPEC production.

The most savage effects of the rise in OPEC prices were suffered by developing nations. Those developing nations specializing in nonpetroleum raw-materials exports suffered lawful declines in their earnings. The consumption of energy is chiefly determined by the use of energy by industry and high-technology agriculture, plus household and commercial consumption, which is itself greatly affected by declines in general levels of combined agricultural and industrial production. As combined interest-rates rises and energy-price increases collapsed levels of production, consumption of nonpetroleum raw materials collapsed proportionately.

If raw materials-exporting developing nations had attempted to duplicate OPEC cartels for other commodities, as Henry Kissinger and C. Fred Bergsten proposed, through UNCTAD and other channels during 1975 and 1976, or as the "Common Fund" was proposed from the same

sources and through the same channels later, the effects of OPEC would have been compounded, causing a deeper collapse in developing nations' earnings from cartelized raw-materials exports than has been experienced during the past eight years to date.

The increase effected by cartelized pricing would have merely added to C under conditions $S'/(C+V)$ was already near zero globally, and no *net* investment in new technologies was occurring.

There is a difference between the foolish extremes practiced by OPEC and establishment of equitable prices. We review the matter of equitable, or *parity* prices, and then proceed to the conclusion of our argument on this matter.

The world food shortage cannot be mastered except by establishment of worldwide *parity* prices for agricultural products, prices comparable to 100 percent of parity price for U.S. agricultural products. Against this elementary economic fact, it is argued that such prices would put food prices above the purchasing power of large sections of the world's population. That latter argument is fallacious, as we shall show summarily. After illustrating the principle for agriculture, we shall extend the application of the same principle to raw materials.

A parity price for an agricultural commodity is not a "subsidized price," not an artificially high price. A parity price is based on two elements: *direct cost* and *capital cost*. The direct costs of agriculture are determined as the average costs incurred by competitively productive farmers. To this is added a gross profit increment, a percentage of the direct costs added to those costs. This gross profit increase covers the farmer's personal income plus an average level of new equity for investment in improvement of agriculture. This rate of accumulated equity is a competitive return on investment, as determined by comparison with nonagricultural products.

If the price paid to farmers falls below that parity price, the result is, first, a lack of equity-investment in development of agriculture, and, at lower price levels, as $S'/(C+V)$ turns negative, a process of collapse of agricultural production.

What has occurred in U.S. agriculture, up to the introduction of "Volcker measures" during October 1979, has been a process through which farmers mortgaged out their farms, to secure replacement operation-capital for the capital lost from selling product below cost. During most years over the past three decades, since the Korean War, the U.S. farmers have lost money on agricultural production. The accumulated result of borrowing of replacement operating-capital has been a loss of farmers' equity to creditors. The combined effect of 1979 rises in petroleum prices and Volcker's tight-money policies has been a collapse of the farmers' ability to secure borrowed operating-capital. Farmers are now going out of production at a rate of about 2,000 farms per

week! Under present trends, the United States will become a food-deficit nation by some time during 1982-1983.

It might appear that labor-intensive agriculture in developing nations is cheaper in direct costs than U.S. agriculture. That is a dangerous fallacy of assumption.

To expand food production in developing nations at rates consistent with the needs of populations, there must be high ratios of capital investment (irrigation, disease control, soil treatment, fertilization, and mechanization). In large parts of Africa, the lack of adequate transportation is an exemplary obstacle to developing specialized market-agriculture in a rational, economical way. The farmers generally cannot support such transport services on present levels of earnings. Therefore, the amount of investment per hectare in Africa must be much larger per unit of present direct cost than in an OECD nation's agriculture. If we compute the rate of required investment for African agricultural land on this basis, then the combined direct and capital costs per unit produced in Africa are comparable to combined direct and capital costs for the United States.

Either the African farmer must receive a parity price, or he must receive productive capital investments in enhanced technologies which add to the same effect as a parity price. If the former, then the developing nations must include a food-purchase subsidy for lower-income ranges of the population as a capital cost added to other developmental costs. If the latter course is adopted, subsidizing technology supplied for improvement of agriculture, the capital cost occurs in this form. The true capital cost is the same, whichever method is used.

The dumping of food on the world market by the British Commonwealth and the United States (predominantly) has thus caused an aggravation of the world food shortage, by creating market conditions under which development of the technology of agriculture in developing nations is undercut. Therefore, the adoption of world parity prices for foodstuffs, combined with a supporting program of subsidies of food-purchase prices over the span of a coming generation, is the only sort of policy which fosters the overcoming of the world's food shortage.

The same principle of parity prices should be adopted for products of mining. These prices *should not exceed* a true competitive combined direct and capital cost for such products of mining globally. At that parity price, no true injury is done to industrial production levels globally. Below that price, mining is depleted just as agriculture is depleted by less-than-parity prices paid to farmers. Above that price, the market for mined products is contracted.

Furthermore, the maintaining of adequate capital costs for both agriculture and mining has the effect of reducing the parity cost per unit

produced—through increasing productivity by means of technologically progressive, capital-intensive improvements.

There is a proper, calculable price, between the lunatic extremes of "free market" and "monopolistic" pricing. This true price, or equilibrium-price, is the proper *protected price*, to be protected chiefly by treaty agreements among nations to this effect.

Illustration: "Import Substitution"

To understand the fallacies of "import substitution" policies, one should concentrate on the earlier discussions of the social ratios. First, we identify the policy itself.

The argument is made, that developing nations should decrease their dependency upon imported consumer goods by importing some consumer-goods manufacturing industries. It is often argued that such imported industries will have the advantage of relatively cheaper labor costs than in industrialized nations, and might even develop as export industries for that same reason of reduced labor costs.

In the main, the result is economic disaster.

Positively, a certain increase in the employed working class is effected, and a relatively more substantial increase of the commercial classes.

When these gains are compared with the situation of the population generally, the warning signs of potential disaster begin to appear. There is very little improvement of the well-being of the farmers, and the effort to keep working-class labor cheap means pressure against farm prices. A side effect of the expansion of commercial classes is an increase of employment in low-paid, unskilled labor-intensive services.

The increased employment in labor-intensive services and incomes of commercial classes are generally increases in the magnitude of d , a potentially inflationary effect. (Since d tends to rise more rapidly under such programs than C or V , $d/(C+V)$ tends to rise more rapidly than $S/(C+V)$.)

A clearer view of the matter is developed by considering the general requirements for development of rural and urban elements of the division of labor.

In order to develop agriculture in a developing nation, we must develop a modern urban superstructure as the instrument through which the transformation of the rural areas occurs. This requires the supply of capital goods of agriculture from urban centers to rural areas. *The emphasis on the capital-goods sector must therefore be higher than in presently industrialized nations*, in such forms as high-quality steel production and related fabrication, in the development of the petro-

chemical industry (fertilizers, etc.), and in the development of high-technology energy supplies and transportation.

If we examine the social composition of the labor-force as a whole, we note that the true social cost of producing nutrition and fiber is extremely high, relative to industrialized nations. Therefore, massive introduction of nonagricultural consumer goods into the limited per capita market defined by relatively high social costs of agricultural products must be cost-inflationary. This cost inflation promoted by "import substitution" holds farm prices below price levels required to foster agricultural development, and keeps the farmers generally in relative illiteracy and poverty. The cost inflation depletes the margins of capital funds otherwise available in the form of consumer-goods purchases. In addition, a costly social infrastructure is required to support the requirements of combined imports substitution and commercial development, a cost which tends to outrun the growth of the tax base needed to support such an infrastructure.

The efforts of the state to correct such an imbalance take the apparent form of "economic repression" against that portion of the urban population's standard of living represented by combined services and manufactured consumer goods. Failing to make the correction sets the impoverished strata of rural and urban poor against both the state and the higher-income strata of the urban population. The ingredients of political-social destabilization are thus set into place.

The developing nation must discourage the marketing of "luxury" consumer goods, focusing upon nutrition, housing, education, sanitation, and health services. To accomplish this politically, the state must foster in the general population consciousness of the realities of agricultural and capital-goods development as the determinants of a sustainable household income level. *The emphasis on heavy industry must be made an adopted policy in the consciousness of the majority of the population.*

There are two particular illusions concerning economic history which must be eliminated from the minds of policy-makers and political parties. The first of these interconnected illusions is the myth which proposes that present developing nations can repeat what the victims of this illusion falsely imagine to have been the history of self-development of the economies of presently industrialized nations. The second illusion, fostered by British liars and others, argues that the development of heavy industry occurred as an organic outgrowth of "free trading" consumer-goods industries.

The significances of the two cited myths is fully discovered by examining the truth counter to each. To approach that truth, a preliminary characterization of each of the myths proves helpful.

To compete on the world market, a nation must achieve a productivity equivalent to that prevailing in that category of world trade. Therefore,

its urban goods-producing sector must be at least as advanced in social composition of capital- to consumer-goods production-ratios as the most industrialized nations. Since the social ratio of capital goods for agricultural development must be higher than for presently industrialized nations, the ratio of capital to consumer goods employment must be significantly higher in developing nations for this reason, as also for the reason already given earlier.

We must think of an *initially relatively small (relative to population), but advanced urban manufacturing sector* engaged in rapid transformation of the agricultural sector. As this industrial sector expands, the ratio of capital to consumer goods production must be maintained at relatively high values.

We also think of this policy in correct terms, if we focus on the matter of bringing the overall per capita productivity of the developing nation up to presently industrialized nation standards. This requires a rapid transmission of advanced technologies to the economy, a transmission which is mediated chiefly through the capital-goods sector.

The emphasis must be on heavy (capital goods) industry from the start.

How does a developing nation construct a utilized capital-goods sector on the base of an underdeveloped consumer-goods market? The actual history of industrialization of the presently industrialized nations points the way to the answer.

Let us take as a reference-point Leibniz's successful development of the steam engine, in collaboration with Huyghens and Papin. (Papin was the first to power a vessel by means of a working steam engine at the beginning of the eighteenth century. The British lured Papin to England and suppressed his invention. It was the emergence of the École Polytechnique which forced the development of the steam engine—via Carnot's collaborator, Fulton, et al.—almost a century later!)

Leibniz's work centered, as we have noted, on the principle of heat-powered machines. For his immediate uses, Leibniz emphasized the development of the burning of coal as the heat source to be used. The development of the steam engine was the direct result of this policy.

To secure the coal for the newly revolutionized industries to be created, coal-mining must first enjoy technological transformation. One of the most critical bottlenecks was the pumping of water from the mines (and the related problem of ventilating the mines). Therefore, the initial practical emphasis had to be placed on developing the steam engine as the unique solution available for pumping water from mines.

These conceptions, and related conceptions of the mercantilists and Kameralists generally, were the basis for the industrial revolutions of the eighteenth and nineteenth centuries. In each case, the development of the industrial revolution was accomplished through military and other

capital expenditures *by the state*. Canals, railroads, improved cannon, the top-down construction of Germany's metal-working and chemical industries under Kameralist influences, are to be compared with the launching of the industrial revolution in France by Carnot's forces. It was the same in the United States.

The development of the private-sector capital-goods industry occurs chiefly through state-funded infrastructural (and military) undertakings. These projects are the initial market for the products of investment in capital-goods production. The smaller capital-goods industries develop, in turn, as vendors to the keystone capital-goods industries. The development of agriculture occurs through the transport of market-oriented rural production to the industrial centers of capital-goods development.

It is out of this evolving relationship between agricultural development and capital-goods development that the proper development of consumer-goods industries occurs.

Once started, after the initial phase, the consumer-goods industries grow relatively in respect of percentiles of employed persons. After this intermediate phase, the proper growth of the ratio of capital-goods to consumer-goods employment reasserts itself in a properly developing economy.

Illustration: Logistics of Food Aid

During the summer and fall of 1980, this reporter and his associates mobilized forces in an (unfortunately unsuccessful) effort to provide adequate food relief for famine-stricken regions of Africa. In addition to demanding such aid for Africa, specialists associated with our effort worked on the problem of the logistics of food delivery. The problem is well-known to African statesmen, but it is nonetheless worth summarizing the matter afresh in order to situate an important practical point of development policy.

If food could be delivered on time by ships, there are usually inadequate port facilities for handling the food. Once the food were docked, there are not transport facilities to deliver it efficiently to the locations where it is needed. If we employed air transport, we face the problem of transportation facilities for distributing the food from the landing-field sites.

Were I President of the United States, how would I properly handle the delivery of food to relieve famine in those parts of Africa suffering such difficulties? This leads us to the key point to be made here.

I would use the U.S. military's logistical capabilities, supported by civilian means. The leading edge of my effort would be the U.S. Army Corps of Engineers. We would employ wartime varieties of emergency

methods to construct ports, construct roads and rail systems, and air fields. By constructing the infrastructure required to distribute the food, we would have built a valuable part of the infrastructure which the nation needs. At first, the transportation network would facilitate the delivery of supplies into the interior. This same infrastructure would then be the means for conveying elements of agricultural technology to rural regions. The same network would become the means for shipment of developed market-products from farms in those regions to urban centers.

As part of the effort, I would propose to the nations being aided, that we cooperate to develop that nation's own combination of a corps of engineers and complementary civilian capabilities, to expand and maintain the infrastructure developed.

Where there exist well-defined project-requirements for water-management, transportation, ports, major energy installations, these should be set into motion for early completion in parallel. The requirements of such projects create the market for development of local industries to support these projects. It is wise to selectively promote those kinds of industries for support of such projects which are priority acquisitions for the continuing structure of the national economy after the completion of the specific projects which stimulate their initial development.

This emphasis upon a military approach to initial development of crucial elements of infrastructure should be properly understood.

France's Louis XIV was no echo of Louis XI. Through folly, Louis XIV was manipulated into rejecting the counsel of Jean-Baptiste Colbert, and to embark on ruinous forms of military ventures. Hence, in consequence of the ruining of France in that period, the development of modern military science was set back from the beginnings it had enjoyed under the inspiration of the collaborators Leonardo da Vinci and Niccolò Machiavelli at the close of the fifteenth century and beginning of the sixteenth. Military science was revived under the leadership of Lazare Carnot, and Carnot's reforms imitated both by Germany's Scharnhorst and the West Point of Commandant Thayer during the presidencies of Monroe and John Quincy Adams. These U.S. military traditions were revived out of bloody fields of battle during World War II, and have recently ebbed from public view with the passing of traditionalist U.S. military commanders typified by General Douglas MacArthur.

The relevant revolution in military science was initiated, as we have noted, by Lazare Carnot, who developed the modern infantry around the revolution in the geometry of warfare effected with his forced development of mobile field artillery. These changes centered around the principle of logistics. An effective military force is essentially a *logistical capability in arms*.

Civilian examples of the same principles are the U.S. wartime Manhattan Project, which developed nuclear weapons, and the launching of NASA by President Eisenhower. In sum, the intensified, coordinated application of concerted logistical capabilities to an undertaking is the quickest and lowest-cost approach to accomplishing a task.

The importance of this approach does not flow from its putative military origins. Rather, in order to develop a capability for winning wars, it was prudent to deploy the most advanced capabilities of modern technology in an intense, coordinated manner to concerted effect. Military ventures have often promoted technological progress because the winning of wars requires the concentrated deployment of the most advanced technologies.

The development of regions of Africa should be defined in terms of military-campaign-style projects of developing infrastructure, and deploying large-scale agricultural-development efforts aided by heavy engineering, as well as putting into place key elements of the nations' energy-production needs and fostering the development of selected key capital-goods-producing industries.

The effect we must create is analogous on some points to the temporary employment of labor from developing nations in France or the Federal Republic of Germany. We must bring modern technology proximate to the population generally, so that the population may assimilate that technology where it presently lives, without suffering the concomitants of being a guest-worker in another nation.

There must be other elements, including essential cultural features, for this program. Nonetheless, the notion of the "crash development project" is the bare skeleton on which to suspend the other essential elements.

4.

A Leibnizian Approach to City Design

The "machine" for the effective development of a nation is beautiful cities bounded by fertile fields of modern agriculture. Such cities are the centers of culture and technology for all of the people, including most emphatically the families of the farmers which share the city at the end of a day's or week's work.

This notion has been the central conception for the development of civilization since earlier than the city-state republics of Ionian Greece. This was the policy of Alexander the Great. It was the genius of the Arab Renaissance. It was the guiding conception of the great Platonic cathedral-builders of France. It was the leading conception of Italy's Golden Renaissance. It was the conception revived, with important new specifications, by Gottfried Wilhelm Leibniz during the latter part of the seventeenth century.

The name which Leibniz gave to a city performing such functions was an "Academy."

We do not propose for African nations the image of the city of Europe or North America today. Nor are we proposing some costly luxury to be added to the list of urgent requirements of hungry people's nations. The concept of the city, properly elaborated and understood, is key to the notion of, and the successful implementation of development otherwise competently defined. The mere fact that this particular conception is poorly known today is not a fault of the conception, but is the fault of the decay in quality of education and moral outlook among the world-hegemonic institutions of the metropolitan nations.

The impediment to discovering the importance of this conception is symptomized most efficiently by those notions of development which portray advancement of the developing nations as a matter of sharing-out of some of the wealth presently concentrated in the metropolitan nations. As a poor man might clothe himself by purchase of garments

which a wealthier man has discarded, so mean and arrogant professors and others of the metropolitan nations propose that developing nations must be satisfied to beg for shares at the back doors of the wealthier nations. So, the World Bank was developed as a poor nation's back door of the richer nations' International Monetary Fund.

In order to discredit that mean and arrogant misconception of development, as "redistribution of wealth" to the poor, let us now concentrate our attention on the alternative to such mean prejudices, before continuing with outline of the principles of the "new city" as the most critical "machine" for economic development.

Two Meanings of "Colony"

In former times, before the Hapsburgs and the British East India Company made the term "colony" a name for mass murder, rape, and enslavement, that same word (and its synonyms) had a directly opposite meaning. This older meaning is treated in Plato's writings.

Under conditions an old nation has become degenerate in engrained habits of outlook and practice, it may be the case that the most efficient approach to saving that decadent old nation is the development of a new nation which selectively embodies the best technological and cultural fruits of the old. So, the decadence of seventeenth and eighteenth century Europe was viewed by the Commonwealth Party colonists of North America.

As we noted earlier in this report, during the period of the American Revolution, the population of English-speaking North America had a literacy rate in excess of 90 percent, in contrast to approximately 40 percent in Britain. Moreover, the Americans were twice as productive as the British population, and had average incomes twice those of the British.

Contrary to liars such as the pseudo-historian Turner, et al., this relative prosperity of the Americans was not a consequence of natural resources available. U.S. Treasury Secretary Alexander Hamilton is explicit on this matter in his 1791 *Report on the Subject of Manufactures*. There is no permanently intrinsic fertility of agricultural land, for example. The wilderness is a stubborn and dangerous adversary of humanity. Man must conquer and tame that wilderness, and develop the land's fertility through improvements which are the products of man's labor. This evidence of early American history is totally clear and conclusive on this point, entirely supporting Hamilton against both the French Physiocrats and British East India Company agents such as Adam Smith and David Ricardo. Wealth is not determined as the so-called bounty of nature, such as "raw materials." Wealth is determined

entirely, exclusively by the application of the progressive development of the productive powers of labor.

The superiority of the average American over the average British during that century and afterward, was chiefly the fact that the English and other colonists of North America were morally and intellectually superior to the average countryman they left behind in Europe. Contrary to commonplace academic lies, the English colonists did not fly to North America to escape religious persecution in Britain. The colonization project was outlined as policy during the sixteenth century by Dudley and others. The purpose was to found on American shores a strong republic, free of the decadence of Europe. The development of this republic was to be used as a weapon for tipping the balance of forces against the forces of moral decay and decadence in Europe. A selection of the best parishes of England and other nations was carefully recruited to establish the new colonies.

Just as the republicans of Europe had founded those settlements, so it was the allied forces of the Anglo-American Commonwealth Party (Benjamin Franklin and Joseph Priestley, for example), together with their traditional Colbertist and Leibnizian allies on the continent, which assembled a strategic combination of allied American and European forces, which brought Britain to her knees before the forces supporting the existence of the newly established American republic.

In turn, the American Revolution became the rallying point for a fresh onslaught of European republicans in their own nations. The École Polytechnique of Monge and Carnot is the political exemplification of this reciprocal connection between the development of the American republic and the effort to establish a republican order in Europe.

Today, European civilization, deeply enmired in moral decadence and associated decay, must be renewed. The key to the renewing of the United States and Europe is the development of at least a large number of the so-called developing nations. We must select the best cultural and technological fruits of European progress, and must deliver these fruits to the development of nations in the developing sector. We must build the new nations, not as approximations of the decadence established in the old, but *better than the old*.

The leading industries and universities of the developing nations must become superior to those of present-day Europe and North America. The new cities of the developing nations must be better than those existing today in Europe or North America. The best science practiced in leading institutions of the developing nations must rank among the most advanced science on earth.

The African will find it difficult, perhaps, to accept the present-day practicability of such a policy, until that African places himself in the shoes of a person, such as this reporter, who looks at Africa from the

vantage-point of an enlightened true perception of the vital interests of the United States, or a nation of continental Europe. (We have been unable to discover an influential person with enlightened perception of self-interest in Britain.)

Here I sit, for the moment, in the Federal Republic of (West) Germany, a political figure associated with a collectively influential (and deeply frustrated) circle of the United States. We, of these nations, have the existing or immediately developable technologies sufficient to solve all of our own principal material problems. Yet, because our nations are permeated with decadence and Fabian forms of moral decay, not only are we unable presently to deploy developed technology, but the industrial economy, the agriculture of our nations, and the moral qualities of our citizenries are being systematically destroyed.

What, in such circumstances, is the true interest of my own nation? I reflect: there are these developing nations, many being destroyed by famine, which urgently require the very same technology our own nations are too decadently foolish to deploy at home for themselves. Let us therefore give this best technology we have to those developing nations. Let us select from among our most capable scientists and technologists forces to assist the developing nations in using such technology, and to train citizens of those nations to master and develop further this same technology.

If we of the United States, for example, can but influence our own nation sufficiently merely to cause that flow of technology to occur, this commitment will provide the margin of change needed to reverse the process of decay in our own nation. Meanwhile, the success of this undertaking in developing nations will accomplish a renewal of the vitality of the human race which will benefit the United States (in particular) as the eighteenth century's American Revolution inspired old Europe.

How shall we finance such exports of technology? By the cheapest-cost long-term credit. If a nation is too poor even to use such credit, then let us employ outright grants over the span of a generation—until that nation is sufficiently developed to afford the credit. If we think of the benefits to world trade resulting over the course of two generations, this will turn out to be the most profitable thing we have ever done.

How Exporting Nations Are Repaid

Where possible, the means for financing development of developing nations should be low-cost long-term credits, with grants used for those cases in which the nations are too poor to permit use of loans.

This is to the double advantage of the developing nations. First, since

the economic activities (infrastructural projects) of the state are the indispensable prime means for developing such nations, the use of credit for the financing of these long-term state investments provides the state political independence as a sovereign state in its principal borrowing-activities. Second, this enables the sovereign state to shape the flows of credit for private investments within that nation, free of the caprices of foreign investments by multinationals.

Since the source of this credit is long-term, if low-cost loans, industrialized nations can provide this credit without being charged by large sections of their own citizens with giving away those citizens' tax-contributions to foreign nations.

The fact that the borrowing nations will repay such long-term loans is not the source of the advantage to the capital-exporting nations. The function of such long-term loans is twofold. Most immediately, such loan mechanisms are the only politically acceptable means for transfer of credit, both in terms of the sentiments of the tax-paying populations of the credit-issuing nations, and the sovereignty of the borrowing nation. Second, such debt, guaranteed by states, functions usefully as a medium of credit within the capital-exporting nation.

The economic gain to the capital-exporting nations is located in the effects of increased high-technology export activity, in fostering more rapid turnover of agricultural and industrial capital stocks in both the exporting industries and industries which are vendors to those exporting industries.

An excellent, recent illustration of the principle involved is the case of the Federal Republic of Germany during the period 1975 to 1979.

During that period the rate of productivity in the Federal Republic exceeded the effects of increased petroleum prices. The chief reason was the flow of high-technology exports fostered by the policies of the government of Chancellor Helmut Schmidt. The turnover of capital stocks promoted by those exports was the principal "factor" promoting the increase of productivity of the Federal Republic's economy.

This is, again, the principle correctly emphasized by Alexander Hamilton in *Manufactures*. The sole source of wealth of nations is the *development of the productive powers of labor*.

By exporting high-technology goods, the United States (for example) increases the turnover of capital stocks, permitting replacement of old capital stocks by technologically more advanced capital stocks. This causes an increase in U.S. national productivity, which increases the wealth of the United States (and similar nations).

The source of ability of the developing, importing nation to pay for such purchased imports is the increased productivity of labor in the importing nation, resulting from productive employment of those imports as high-technology capital stocks.

It should be clear that the same benefit to the importing nation would not occur if the imports were either "luxury" consumer goods, or import of capital stocks for production of "luxury" consumer goods. A developing nation should import consumer goods and consumer-goods productive capacities *only to the degree* that the consumption of those goods maintains or increases in some essential way the productive powers of labor. Only those imports which increase the productive powers of goods-producing labor (directly or indirectly) will lead to sufficient increase in output of wealth to justify incurring loans for such imports.

It should also be clear that both the exporting and importing nations can afford to increase the traffic in high-technology capital stocks as rapidly as the importing nation can put such capital stocks to productive use.

Although a profit on a sale is necessary to commerce, to maintain progressive investment in capital stocks by the seller, the true source of economic gain is not that profit as such, but rather the increases in wealth secured through advances in productivity of the seller, through technologically progressive turnover of capital stocks.

On condition that such policies predominate in practice, national banking institutions of capital-exporting nations can issue relatively unlimited amounts of credit for high-technology exports, and at nominal interest rates. The limit to creation of such credit is defined by the exporting nation's capacity to produce exports of high-technology goods, and, of course, by importing nations' purchase of goods produced by such portions of the exporting nation's national capacity.

Therefore, if the building of a new city in some African nation does in fact contribute to that nation's growth of productivity in a significant way, it is in the interest of the capital-exporting nation to aid in making that new city possible. Therefore, the notion of creating new cities now is a fully practicable proposal.

This narrows the practical question to that of the nature of the benefits provided by such a city.

The African New City: Cost Savings

The designing and building of even a single new city designed to house 250,000 persons is a costly investment. Implicitly, we are indicating the early development of a string of new cities throughout the region of an African "common market," each city with the *capacity* to sustain a population of from 100,000 to more than 2,000,000 persons. This is, indeed, a most costly investment!

Is it therefore too costly an investment to be considered for Africa at this time? On the contrary, *the savings of costs made possible with such*

cities are savings which relatively poor nations, such as African nations, cannot afford to defer.

Let us review some of the kinds of savings of cost a modern city provides, and then indicate the reasons a new city is a far less costly investment than efforts to repair an old city.

The most obvious cost-saving provided by a modern city is the advantages provided by the density per square mile of inhabitants. The general facts are well known to everyone who has been obliged to administer or analyze governmental budgets. Nonetheless, it serves a useful purpose to illustrate the nature of the facts here.

How many meters of pipeline must be installed per household for transport of water, sewage, gas, or centrally distributed heat? Consider not only the installation costs, but also the maintenance costs per meter. How many cubic meters of street construction are required to be built and maintained per household? Apply per household costs of construction and operation to public transportation.

Consider also those categories of function whose quality increases with population-density: health services, education, for example. For the same cost per household, we can provide far better services in densely populated centers than in relatively dispersed areas.

In respect to other functions, which are required by only some portion of the population during any interval of time, as well as functions which are necessary to only some percentage of the whole population, many of these cannot be provided economically in any area but a densely populated one. If only less than 5 percent of a population requires a certain type of function, this can perhaps be provided efficiently within a densely populated area, but not in a relatively dispersed population area.

A further refinement of the same notion is obtained by considering the variety of functions with which a group of households are associated during a day or week. Members of these households have different kinds of employment, and it is desirable to have efficient arrangements for mobility of employment with the labor-force. Other members of the same households are in educational programs. The relationship among these various institutions and households requires optimization of the time required for members of households to have daily or weekly access to the places of such institutions.

These and related considerations can be unified into a single conception: the physical geometry of movement of people and useful things within a functionally interconnected whole.

Even from elementary standards of accounting practice, the only way in which to provide a necessary quality of life at an acceptable cost is to organize the indicated varieties of interrelationships into the form of a city.

Unfortunately, existing cities are unacceptable in terms of both function and effective cost of function. In some cases, an existing city is located with such unique appropriateness that we must rebuild such centers to the effect of correcting flaws in function and operating costs. It would be less costly to build a new city than to repair an old one. In some cases, it is not practicable to replace an old city; in some cases we must accept the higher costs of repairing it. In Africa, new cities are properly the dominant theme of a development effort.

In summary of this immediate point: cities are the least costly instrument for development, and the development of new cities is less costly than rebuilding old ones to make them useful.

Now, let us outline the concept of a new city by means of approximation. First, let us consider the matter broadly, as a matter of architectural policy. After that portion of our discussion, we shall focus on the crucial conception: the notion of the new city as a Leibnizian Academy.

Broad Notions of New-City Planning

In this next present portion of our discussion of the city, the specification we cite is hypothetical, excepting one of these. That exception is this: *The core of the new city must be an educational complex.* On all other points, our purpose here is to outline a sufficient number of the principal considerations to be included in city design so that the general conception of the design-problem is communicated.

The very center of the city—at least the *functional center* of the city—must be a complex of *pedagogical museums, libraries, and cultural centers* associated with the activities of those museums and libraries. All urban life should be organized around this complex of museums, associated parks, and teaching and research institutions. Naturally, this should include the leading medical services-research center of the entire region of the city and its surroundings.

Let us now contemplate the following hypothetical specifications for our new cities. The hypothetical criteria used for purposes of illustrating the concept here are the result of informed insight into certain of the leading problems of city-design, but are otherwise arbitrary assumptions for purposes of illustration. The purpose of this interpolated exercise is to outline the scope and implications of the policy-making involved.

Let us assume that we have defined two categories of urban centers. The first is a city in the proper sense of the term's conventional usage: a population center including residential, industrial, commercial, and educational centers. The second is an industrial city, linked in each case to the labor-force of one or more nearby cities of the first category. The

link is provided chiefly by a combination of high-density, high-speed passenger rapid-transit services and freight service.

For cities of the first category, let us assume that we have prescribed that each city will be designed to expand its number of inhabitants to a predetermined maximum population, that the allowed city-designs provide for maximum populations of only the following scales: 100,000; 200,000; 300,000; 500,000; 800,000; 1,300,000; 2,100,000.

Let us also presume that we have prescribed that there will be no urban extension into the countryside beyond the prescribed limits of a new city's design. Each will be an urban "island" which is surrounded by (chiefly) modern agricultural fields and forests, and connected to only the most proximate other cities by rail and major highways. So, industrial cities will be set off by intermediating rural area from the relevant regular cities.

Let us assume that we have varied the designs of cities somewhat to take into account the fact that one may be situated on a seacoast, with a harbor; another may be on a navigable inland waterway; another may be landbound.

If it became desirable to have an urban concentration whose population exceeded 2,100,000 inhabitants in capacity, we would place another or two of the specified varieties of new cities proximate to one another, linking them by a dense-traffic, high-speed mass-transit system, as a means of integrating the populations' functioning.

It is not hypothetical to propose that most of our new cities would be situated at either a seacoast, a navigable inland waterway, or an artificial waterway (such as a canal). For the present, and the foreseeable future, the advantages of cost of water-borne bulk and other heavy freight are so considerable that this cost-factor must be observed in all possible cases. This is not merely a matter of the freight traffic in and out of a functioning city. The building of a city is itself a massive problem of logistics. Otherwise, access to large supplies of water for commercial as well as population use is a major economic consideration. Therefore, in building an inland city in a site removed from major "natural" water courses, the construction of canals to that city to provide an additional mode of transportation of freight, as well as a conduiting of water supplies to the city and its surrounding agriculture (perhaps), is desirable.

Furthermore, one of our tasks is the transfer of excess run-off of fresh water from high rainfall areas into arid and semi-arid areas.

It is also not hypothetical to specify the notion sometimes named the "starport" design.

This design has three categorical features:

First, ocean-going, river, rail, truck, and air transport of freight must be efficiently interfaced to facilitate rapid movement of goods economically from one mode to the other. Although it may not be customary

to shift freight from water-borne bulk transport to premium-grade air-freight transport, the industries and other entities receiving and shipping freight are dealing with most freight classifications simultaneously. The consolidation and division of shipments and receipts of the freight transport in and out of a firm or group of enterprises in the same area is a crucial conception of freight management.

Second, to achieve economy in movement of freight, designs of and procedures for handling standardized containers are essential to rapid and efficient handling of freight generally.

Third, the movement and the warehousing of freight are properly treated as a single operation. Freight of less quantity than the capacity of a transport facility (train, bus, car, truck, and so forth) must be consolidated to make economical use of transport capacity without undue delay in turnover.

In the movement of freight (including warehousing) there are a number of premium economic considerations often overlooked.

First, every day freight is between the original shipper and ultimate receiver, that freight is part of *goods-in-process inventory* for the economy. As the ratio of this inventory to an economy's total production rises, the value of that inventory is a capital-factor for the economy.

Assuming that there are 250 regular industrial working-days in a year, each day the whole output of an economy or its equivalent is in transport, is an added amount of capital carried by the economy, in the order of approximately 1/250th of total national output. An average of five days avoidable delay in transport time is therefore 2 percent of national output carried as factor of inventory cost, ten days 4 percent.

We compensate for the varied value of output by moving freight which has the highest value per pound by the most rapid more costly means of transport, and also use the most rapid mode of transport for even relatively low-value items whose late delivery would create a costly bottleneck in production. For bulk freight which has the lowest value per pound, we prefer water-borne transport. For some high-value freight, we use water-borne transport when the costs of alternative transport for that are so high that it is cheaper to carry the extra inventory cost than to pay the alternate increase in freight cost.

In all cases, the rapid transport of freight, including rapid transition at low cost from one mode of transport to another, is a major element of cost-variation for a national economy.

This also applies to inner-city distribution of freight from warehouses in the city. The movement of goods to stores, including daily deliveries of perishables such as foodstuffs, is an important aspect of this problem. (We shall come to that point in this immediate subtopic of discussion.)

Second, smaller communities and small enterprises within cities depend for economic survival on regular deliveries of freight to and from their

locations, even when the amount of freight transported is small. This problem was mastered within the U.S. economy during the postwar period by a system of regulated freight transport. Regulated freight charges permitted the integration of trucking operations with sophisticated warehousing operations. Freight was consolidated for delivery to numerous receivers along a route of delivery for an assigned truck, under conditions in which each shipment processed was a small part of the total load of the truck. This efficiency was enhanced by the use of computers.

Under the Carter administration, at the instigation of Senator Edward Kennedy, "trucking deregulation" was initiated, with the U.S. trucking industry collapsing in both economic and delivery performance as a result. A comparison of 1976 delivery performances in the United States and the Federal Republic of Germany, with the miserable performance of transportation in Britain, shows not only the monstrous effects of the kind of deregulation introduced to Britain years earlier, but shows the importance to the entire economy of the quality of integrated warehouse-transport operations which regulation provided the United States.

Third, as we noted in the conclusion of the preceding section of this report, the single most crippling problem for the economy of most of Africa is the lack of adequate logistics. We must develop adequate logistics at optimal cost and capital outlay. The proposed approach to new-city development, combined with application of the "starport" conception and emphasis on widespread adoption of unitized container methods, is essential on this account alone.

We must concentrate urban activities in a few well-planned centers, and use those centers as distribution points for adjoining rural regions. By linking the relatively few new cities by means of a limited number of efficient transportation grids, using the "starport" conception as a guide to our approach, we can achieve the optimal improvement of logistics with the relatively least investment and over the relatively shortest span of time.

The optimal approach to establishing the new city is to construct a universal *substrate* first. For purposes of imagery, one might think of this as a vaulted honeycomb of tunnels and special other areas beneath the surface of the city.

This substrate will provide ways for installing utilities, for subsurface transfer of freight to locations within the city (preferably in electrically powered vehicles), for removal of waste from the city, for subsurface rapid public transit of people, for options such as subsurface independent passenger vehicle transport, for storage of vehicles. Such a honeycomb should be modular in general design, to permit economical changes of even a relatively radical alteration of technology of transport modes and services during the next century.

The quality we can afford to provide, both for the substrate and structures above the substrate, is largely a matter of the useful life of the structures and relative costs of maintenance of those structures over their useful life.

The initial investment outlay is reduced by expanding the new city to its full capacity only as that expansion is required, and by governmental retention of title to the land area of the complete city and projected as well as constructed inter-city connecting passageways.

It is urgent to prevent speculation in the value of the land area itself, otherwise acquisition-costs for sites will eat away major parts of the funds dedicated to the finished construction. Africa must prevent itself from becoming the victim of the lunatic real-estate speculation which is the chief driving-force behind the present financial bubble and monetary inflation of the industrialized nations.

The required quality can be provided if we adhere to a policy of placing priority in household consumption on quality nutrition, housing, medical, and hygienic services, and education (including the cultural life of the population as a whole).

We divide the design of the new city into zones. In addition to the central educational region around the pedagogical museums, we set aside residential, industrial, and commercial areas. (The municipal center should abut the central educational area.) Initially, we wish to keep the scale of the commercial zone small.

The case of the medical services requirement illustrates the probable approach to be taken to certain other matters.

It is desirable to integrate a number of functions into residential areas. Schools for younger children, centers for preschool-age children, food stores, and certain forms of medical-service centers, to serve as service-points for routine health services care, and as conduits into the major medical services of the city.

The general problem of design to be resolved is the approach to relatively high-rise construction.

We must desire the provision of apartment-residences in multistoried buildings with elevators to provide the advantages of economy and population-density. That is basic economy. The problem is to articulate such construction to the effect of providing light, greenery, and a sense of spaciousness at all levels of elevation. We are persuaded that this challenge can be solved economically by architects and associated scientists and engineers. We are also certain that the principles of Platonic ratios employed by the Gothic cathedral-builders, and successfully mastered by great Golden Renaissance painters and other artists, can be and must be applied to the problems of combining function and psychological effect.

It is a lesson of living in and studying cities that a good city is one with a large portion of trees, grass, and other flora pleasing to people, and that this effect can be achieved (admittedly at some cost) at higher elevations of a city's structures. It is also a practical fact that an increased density of such trees and other flora—especially trees and shrubs—functions to moderate the climate of the city.

It is not necessary, of course, that all of the desired features be completed at once. Just as the construction of the city can converge on its intended design-limits as warranted, the completion of details of the design can be progressive—on condition that those design-features are adequately anticipated.

The essential thing which the citizen of such a city must experience over the course of the city's gradual completion is a sense of ongoing progress, of perfection. The city must be to the citizen a growing organism, a place which is fulfilling its design from year to year and becoming better as this occurs.

With such images of the city in view, many of the schools of the city, as well as elements in the city's health services, should be integrated into the structures of the residential zone. Those kinds of distribution facilities which the population requires for daily purchases, such as food stores, should also be integrated into the residential zone's structures. We should include centers which can perform multiple community functions.

All of these extensions of the service-functions of the city must radiate (in effect) from the feature of the city which defines it as an Academy, the center developed around the pedagogical museums.

To develop such new cities, we begin with the logistical network of both the nations and the common market they form. We plan the cities and that logistical network as one design-conception. The building of the logistical system is the skeleton which we construct first. The cities develop as prelocated nodes attached to that skeleton. The cities are constructed through the logistical system and service that system. The cities, as nodes, service the surrounding rural areas. So, the nation and the development of the nation are integrated as an ongoing process of perfection.

Over 2,300 years ago, at a time in which productive technology was far less developed than it is today, the relatively small military force led by Alexander the Great launched the greatest increase in the number of and connections among cities ever projected before that time, and created in a few years more strategically located cities than have ever been established since in so concentrated a time span.

With the assistance of the industrialized nations, such an undertaking can be accomplished in Africa. It is to the urgent advantage of the

industrialized nations to provide that degree of assistance. The project is realistic. It would be unrealistic not to undertake it, considering the prolonged suffering and general risk to humanity should we fail to do so.

The Economics of City Design

In the light of the discussions in sections §2 and §3 of this report, we can determine facts concerning the development of the nation's population which enable us to predetermine the number, populations, and proper proportions of the urban-rural population and of the composition of the cities twenty, thirty, forty years hence.

We can project the birth rate, and can project with fair accuracy shifts in the death rates for the present and succeeding generations. Of the households of persons under the age of seventy years living forty years hence, we know generally what percentage of the whole will be engaged in rural occupations, and what percentage in urban occupations.

Let us assume that the projected rural population for Africa for the year 2021 is 30 percent of the whole population under seventy years of age. We would tend to assume, therefore, that an additional 45 percent of the total population labor-force so indicated would be employed in urban goods production, with not more than 15 percent of that total employed in consumer-goods production other than housing and infrastructure. Perhaps 15 percent of the total labor-force would be engaged in professional occupations including medicine, scientific research, engineering, teaching, leaving 10 percent for administrative, commercial, and nonprofessional service categories. These figures are not exact, of course, but they accurately indicate the general relationship among the indicated categories assuming a 30 percent rural component for the labor-force.

The average incomes of these African workers would be below U.S.-Europe-Japan standards chiefly by the factor of the excess ratio of rural to urban occupations by comparison with the presently industrialized nations of today's categories. It would be sensible policy to establish parity of household consumption with European households in the indicated priority categories of nutrition, housing, hygiene and health, and education and culture. Thus, incomes would fall below European standards only in the remaining categories of consumption.

That adjustment of income-parity by giving priority to indicated categories is made tolerable by a policy of holding down the expense-ratio for the whole economy in administrative, commercial, and non-professional service categories. The inhibiting of the growth of the commercial and nonprofessional service categories corresponds to rela-

tive limitation on the lower-priority categories of household consumption.

In urban industrial and related categories, the African worker of 2021 should be approximately as productive as the European worker, and his industries of approximately the same order of effective technology and capital-intensity. He will produce as much, at least approximately, as the European worker, but will suffer a relatively lower income as a result of the lower productivity of African agriculture. (Since he must pay more for food, in terms of effective social cost of the production of food, he compensates for the higher cost of food by buying less of lower-priority categories of household consumption.)

We also know that under conditions of a shift of world policy toward technological development of the developing economies, the general rate of increase of industrial productivity should be in the order of 5 percent per year or greater. We also know that the energy consumption of industrial production will rise at a greater rate than gains in productivity. We can therefore estimate reasonably (at worst) what the production, productivity, and energy requirements for the advanced sector of today should be for the year 2021.

Similarly, we can project capital-intensity requirements.

These estimates provide us a guide for the standards to be applied to *competitive* industry in Africa (and elsewhere). Assuming that Africa obtains the credit for, as well as maintaining a policy of developing competitive industries, we can project the parameters for Africa's urban population. (What the prices are, we do not care; we need consider only the functions defined in terms of $S'/(C+V)$, $C/(C+V)$, and W_s .)

These estimates enable us to project a budgeted set of data for the African urban population for the year 2021. Counting the cities and other urban centers in which this population is located then, we are able to project the proportions of the new cities for that year.

We know the ratio of workplaces in industry to total population, the estimated number of households (living units) into which that population is divided, the amount of energy production the city will require, and so forth.

Now, let us rethink the ground we have covered. Let us assume that the desirable figures for 2021 are not reached. Or, alternatively, let us assume that we do better in development of agriculture than is projected. What happens, in either case, is that we simply adjust the time-scale for rate of completed development of the cities. Such adjustments are feasible provided that the rate of development and proportions of that development are kept within conceptually definable limits.

If the rate of development is too low, then, perhaps, population will exceed potential relative population-density—as the Club of Rome desires should occur very soon. If it is permitted that the commercial

and nonprofessional service categories expand beyond the ranges we have implied in statements of budgetary goals of 2021, we shall suffer badly from such disproportions.

This brings us once again to the voiced objection of the African who argues, "This depends upon the speculation that the presently industrialized nations will recognize it to be in their own vital interests to provide such magnitudes of flow of technology to Africa." We have examined that point earlier. We pointed out that the export of technology to such purposes increases the wealth of the exporting nations by increasing the turnover of capital stocks of the exporting sectors of the exporting nations.

Now, we examine that same point from a different vantage point.

If the African critic now agrees that it is advantageous to those exporting nations to support the sale of technology under proposed arrangements, the same African might still argue, "If I concede to you that it is advantageous for the exporting nations to adopt that policy, is this policy the only alternative available to them? Could they not increase their capital-stocks turnover, with the same benefits of increased productivity, some other way—and decide that they do not need Africa's markets for their technology?"

The answer is—with a certain qualification—that the United States (for example) needs to export such technology to Africa. The need may not be as acute as it is for the life-or-death situation of Africa today, but it is a very strong need nonetheless. The proof is elementary.

The present level of technology is always expressed in terms of the social ratio $C/(C+V)$. This ratio is conditional, of course, on the potential rate of productivity $[S/(C+V)]$, not $S'/(C+V)$ for this case], and is associated with a specific value of W_x .

This means, however, that the rate at which technology can be sold is limited by the *number of industrial (or agricultural) operatives* which can be employed in use of such capital stocks. C is always a *social magnitude* which corresponds to a rate of production (and, consumption) of capital stocks of a certain correlated technology.

To restate the same point in cruder terms: the amount of profit an industrialist can earn is limited by the number of industrial operatives available for him to employ producing with capital stocks in which the industrialist invests.

To use another crude but relevant illustration. Suppose the United States were to buy high-technology capital stocks from U.S. industries, but to dump the purchased capital stocks into the Atlantic Ocean, rather than exporting them for use in Africa. Would the turnover of capital stocks in the industries producing for export not be the same as if those stocks had been exported to Africa?

This leads us down a slippery path, but leads us to an important conclusion nonetheless. We seem to be arguing against *grants* for African development, as will be apparent immediately, but we shall show immediately after that that our fears on this account were an illusion.

The export of technology to developing nations, under the terms we outlined earlier, is covered by debts contracted (albeit at nominal borrowing costs) by the importing nations. (Except for exports under grants, of course.) The value of this debt is not that it is a debt. The value of this debt is that it corresponds to wealth-creating assets in Africa, *assets which are increasing in value through useful production*. That is the first difference between exports of technology on credit and dumping machinery into the Atlantic Ocean.

The next degree of distinction to be made is between debts contracted (for example) by African nations for import of useful technology and refinancing debts contracted to the IMF, World Bank, or a cabal from the Basel, Switzerland Bank for International Settlements. The debt being refinanced, in the latter case, is the refinancing of a worthless debt—a debt which the debtor lacked the means to pay in the first place. The refinancing increases the debtor's debt without improving the debtor's ability to pay the debt the debtor was unable to pay in the first place. (This practice is sometimes represented as the practical wisdom of a prudent leading banker!)

In the case of the debt contracted for technology, the technology, if properly selected and employed increases the debtor's production of wealth by an amount greater than the debt service incurred. Provided the rate of interest on long-term credit is sufficiently low, all but the so-called least-developed nations would profit from such an arrangement.

In the latter case, the government or bank which issues the loan has not made a profit (on a low-interest loan). However, the seller has made a competitive profit on the technology sold. This adds to the tax base of the exporting nation on account of that profit, and also increases the tax base, directly and indirectly, through added productive employment in that nation. The government itself benefits from what seems an unprofitable sale in that way. Furthermore, as we noted, the turnover of capital stock is increased in the exporting nation, which results in increase of the wealth of the exporting nation in that way.

Therefore, as we noted earlier, the export of technology on low-interest, long-term credit is extremely advantageous to the credit-issuing nation, provided that the importing, borrowing nation's economy actually benefits from that import through increased productivity. It is an elementary principle of sound banking, that if a loan is truly to the net advantage of the borrower, it is also to the net advantage of the banker.

This reality is reflected in the value of the debts of the developing

(importing) nation as an instrument of credit within the financial markets of the exporting nation. As long as the exporting country creates the credit to support that loan through a combination of tax revenues and participating lending of savings for the balance of the loan, there is no problem with the expansion of credit for export in this way.

What, then, of the alternate case, in which the technology is exported as a grant. In that case, this grant is a charge against the tax revenues of the credit-issuing nation. Two things immediately offset this burden on the exporting nation's taxpayers. First, this portion of taxation directly stimulates the economy, increasing the profits of the exporting firms and their vendors, and increases the tax base in the same manner as for exports shipped on credit. Furthermore, provided that the technology contributed to the developing nation is adequate in scale and effectively used, that developing nation receiving grants today becomes the next generation's customer for purchasing on credit terms. In both cases, whether on credit or through grants, the exporting nation is developing prosperous customers of tomorrow. Meanwhile, through the accelerated turnover of capital stocks, the exporting nation is increasing its productivity, and thus its national and per capita wealth.

Now, dividing the total C which the exporting nation must export to realize these benefits, by the $C/(C+V)$ characteristic of contemporary technology, we deduce the number of productive operatives who must be employed to put that amount of C into work. Without converting that C into capital stocks of actual production, there is no sound basis for producing it.

Thus, to the extent that the rate of progress of technology is limited, as we shall show now, the modern industrial nation's economy's greatest problem is *a shortage of people!* Without employable productive labor, to transform the wealth represented by capital stocks into still-greater wealth, the profits of the exporting nations would tend to collapse. To have that added productive labor, that productive labor must be created by households of a corresponding larger population. Of course, the people contributed to the labor-force by those households must also be developed to competence in the levels of technology the invested capital stocks represent.

The only alternative (to the same effect) to expanding the industrial labor-force of the world in scale is to increase the rate of development of technology such that all of the newly produced capital stocks could be invested in increasing the capital-intensity of existing production. In other words, the rate of increase of capital-intensity [of $C/(C+V)$] defines the limits of an industrial economy's reinvestment in intensification of its own existing scale of production per capita.

The industrialized nations as a whole must export technology to developing nations, because, at present levels of advancement of capital-

intensity in their own sector, the developing sector is the region in which the people to be employed are to be found. The importation of guest-workers by the Federal Republic of Germany is an expression of this.

Therefore, on condition that the productive powers of labor in Africa are adequately developed, the industrialized nations need Africa's progress only less than does Africa itself.

Yet, the African critic has another objection: "If what you say is true, then why do the industrial nations maintain a contrary policy? Are you suggesting that their industrialists and politicians are too stupid to recognize facts as plain as you represent your argument to be?"

In a manner of speaking, we are obliged to admit that the industrialists and politicians of the industrialized sector have been behaving stupidly. I emphasize, "in a manner of speaking." It is not exactly *stupidity*—although we must confess we have met a few parliamentarians in the United States and elsewhere who have proven themselves both sincerely and genuinely stupid. The correct name for what may appear to be stupidity is *ideology*. This brings us back to the topic of section I of this report, the pernicious influence of British ideology, most emphatically British irrationalist political economy.

There are few industrialists with whom we are acquainted who would not concede at least the nonmonetary aspects of the summary argument we have given in this immediate section of the report. Clearly, no executive is qualified even in the most rudimentary fashion to direct an industrial corporation unless he concurs with the principles we have outlined, *insofar as they bear upon production itself*. It is in the realm of *monetary* policy that otherwise accomplished and intelligent industrialists often are transformed into wild-eyed, irrational ideologues.

This reporter sometimes thinks of certain industrialists that U.S. labor could be twice as productive as it is today, and could even pay industrialists for the privilege of performing that work, and those industrialists would still insist that the cause of inflation was the failure of employed labor to pay their employers enough for that privilege of working. That is the extreme case, but such wild-eyed ideological nonsense erupts sometimes even from executives who otherwise operate their firms quite successfully. Such is the influence of ideology.

In many cases, there is strong reason to believe that the industrialist who spouts Professor Milton Friedman's evil sort of nonsense about monetary policy is merely regurgitating foolishness he believes he is expected to be overheard stating, rather than wrong ideas he has concocted through the kinds of mental processes he would employ to direct an industrial enterprise.

Our African critic notes these remarks, but adds: "What you have said is very interesting, but does not really respond to my question. Presume that your economic analysis of the matter is correct and that

the politicians and other influentials may have been behaving stupidly. The practical point of my earlier question was: Is there any basis for believing that the present policies to date will be changed over the course of the foreseeable near future? What is your response to that practical point?"

Permit this reporter to give the bleaker prospect first. *There is absolutely no assurance that this stupidity will end in such quarters.* The present stupidity, or even worse, might very well prevail over the coming period. As was emphasized earlier in this report, there is no evidence in history to the effect that mankind as a whole has an intrinsic gift of correcting his errors in time to survive. There is no evidence from history which indicates that we might not be presently living out the last few years of human existence on earth. The overwhelming preponderance of evidence adducible from the course of the past decade and a half implies that the human race is virtually finished.

Perhaps, in fact, Africa is already doomed. Perhaps it is too late. Unless IMF "conditionalities" are ended, unless the forces allied with the Club of Rome are crushed, unless the pandemic of irrationality pouring out of Khomeini's Iran and the international rock-drug counter-culture is crushed, and unless the forces allied with the Bank for International Settlements are defeated, Africa is already doomed to die of famine, epidemic, and raging, murderous banditry of one sort and degree or another. Either we succeed in moving the world toward the kind of policy recommended in this report, and soon, or Africa's case is utterly hopeless.

If there is any vindictive gratification to the dying populations of such a doomed Africa in the fact, the fact is that the policy which dooms Africa will lead soon enough to the similar doom of those nations which have tolerated the genocidal murder of Africa.

Only after we have faced the fact that the presently hegemonic policies do point toward the self-extinction of our species, are we equipped then morally to undertake what must be done. We must shed from our minds all illusions which console us falsely that, as in some children's story or a Hollywood movie, the "hero" will survive in the end. Only a perception of the fact that mankind might not survive its present folly could clear the mind of childish illusions, and enable us to focus our minds clearly on the means by which such doom of our species might be averted. It is only by way of such clear-headedness that we might succeed in finding a pathway out of this impending doom.

The practical question is therefore better posed in this fashion.

The practical question is whether the reality of looming disaster to civilization will penetrate the perceptions of influential statesmen and others soon enough, and powerfully enough to motivate them to reject

the ideologies leading us toward such doom. There are indications that the reality of the situation is being sensed increasingly in some leading circles.

Since 1977, the key force which has prevented humanity from sliding into doom has been the close cooperation between France's Giscard d'Estaing and Chancellor Schmidt. The perceptions and responses of that alliance have been inadequate at many junctures but, on balance, that alliance has been the keystone for every effort which has hindered major disaster so far. The replacement of President Carter by President Reagan increases the possibility of positive developments, on condition that this is not offset by some disaster to the Giscard-Schmidt combination. In addition to these relatively positive features of the recent situation, there is a scattering of other useful developments.

The lack of an adequate perception of the danger in relatively positive leading circles is reinforced by the lack of a well-supported clear and adequate alternative set of proposals, to serve as replacement for the ideologies and associated policies which have been steering the world's affairs increasingly over the recent decade and a half.

In sum of these arguments, the proper response is that wishful dreaming, wishful hope that one might stumble pragmatically to survival through one worthless compromise after another, is a danger second only to the evil which wishful dreamers prefer not to see. Only well-founded hope, expressed as *unity around policies which could succeed, if adopted*, is a practical policy under such circumstances as those of the present.

The shock-effect of intensified disaster, the combination of a rapidly deepening global economic crisis and other lunacies erupting now, might awaken a sufficient number of influential forces to a sense of reality. If that occurs, and there is evidence to support the notion that this might possibly be occurring now, and if genuinely alternative policies have been placed on the table as seriously intended options, the direction of policy would change radically.

In that case, and only that case, would the industrialized nations reflect the perception proposed in the preceding argument for such technology-transfer as a statement of the self-interests of the industrialized nations.

Therefore, the only practicable course of action is to place this alternative option on the table, as is done here.

Before turning to the topic of the Academy itself, we summarize the outline of the economic policy proposed.

The sole source of wealth is development of the productive powers of labor. The realization of the development of human labor depends upon capital stocks consistent with that developed potential skill. Under

present trends in technological progress, the industrialized nations generally cannot maintain their economies without massive increases in exports of technology. Therefore, those technology-exporting nations must seek out those portions of the labor-force of developing nations which can be upgraded more or less immediately to productive employment using the more advanced technologies embodied in the capital stocks to be exported from the industrialized nations.

To sustain this market for technology, the limited portion of the developing sector nations' labor-force now able to assimilate advanced technologies must be expanded. This requires directed methods for promoting the development of the potentials of populations on a large scale. Therefore, if the export of capital stocks to developing nations is to succeed, there must be an accompanying twofold investment in the infrastructure of the developing nations. There must not only be a development of infrastructure to support the industries initially developed. There must be a massive development of the infrastructure needed for development of the population of developing nations more generally.

Under that policy, the very population of the developing sector which the Club of Rome proposes to murder is the greatest asset of not only the developing nations themselves, but of the industrialized nations desiring to export technology to those nations.

Every infant born in any part of the world has the potential for development of his or her mental powers to the level sufficient for adult competence in use of modern technology. That child can achieve at least an approximation for practice of the highest level of productive powers of labor in the world generally today. It is that potential development which is the only source of wealth, and only that development is a credit-worthy asset in the eyes of a truly prudent lender.

Yet, our justified enthusiasm for the potential of that infant, that child, is based on the knowledge that there exist practicable approaches which can develop such potentials even in the children of an illiterate, oppressed population. That enthusiasm is justified only to the extent that we build into the process of development the machinery which can catalyze a realization of that child's potential.

What occurs at the point that economic development had absorbed most of the available population of the world? By that time, we must have increased the rate of development of technology such that we no longer depend upon expansion of the economy in scale. The long-term objective of the process of transforming the developing sector is to use the rapid turnover of capital stocks associated with development to increase the institutionalized rate of technological progress to the level we shall require once the two generations or so of transition to the new world economic order have been completed.

The Academy

The driving-force for the development of society is science in the sense we have defined *science* earlier. It is the mastery of the lawful composition of the universe, as we prove such mastery through technological advances correlated with increases in the potential relative population-density of society. The problem of organization of society is the problem of integrating the whole development and practice of the society around the highest levels of progress in scientific knowledge defined in that way.

It should be adequately clear at this point that neither Leibniz nor we intended the rule of nations by a "technocracy." A better name for science might be *statecraft*, a unity of method of outlook of the development of morality and scientific practice. It is otherwise what the term *politics* ought to come to mean.

The most efficient connection between the developed knowledge of the scientist and the mind of the child of a poor farmer or unskilled or semiskilled laborer is a device called a *pedagogical museum*.

A pedagogical museum is roughly described as a collection of historically ranked exhibits of the crucial features of development of a branch of technology. By branch of technology, we might mean productive techniques, we might mean the development of projective composition of paintings during the Golden Renaissance, or exhibits which demonstrate sensually the development and principles of the well-tempered system of musical composition.

For purposes of illustration, let us focus our attention now on a particular one of several alternative task-orientations of a particular variety of historically ranked exhibit. Let us think of an exhibit designed to reach the mind of the child of a poor farmer or unskilled laborer, a child of perhaps between ten and fourteen years of age.

The exhibit might represent the development of the steam engine. It might trace the development of man's knowledge of the electromagnetic plasma, beginning with a repetition of William Gilbert's sixteenth-century discovery of a magnetic plasma in the flame of a candle. The exhibit has the function of imparting to a child who spends perhaps an hour going, step by step, through the successive levels of historical development of that technology, a conception of the field of technology, and also a conception of that knowledge as something which has been developed through successive crucial discoveries.

The functions of the pedagogical museum for such children are to impart broader general knowledge to a large portion of the children visiting the exhibit, and to aid a child attracted by that subject in gaining further knowledge of the same subject. Furthermore, a parent who accompanies the child through such an experience shares the child's

experience of gaining knowledge in that way. This strengthens the parent's knowledge.

Such pedagogical exhibits, developed by the most gifted pedagogues and technologists, supply schools with proven methods for efficiently communicating the same subject to students. The improved teaching of technology with aid of experimental exhibits is radiated from the museum into the school system generally.

The maintenance and servicing of such a pedagogical museum is properly the function of centers of higher education and research. So, in these and related ways, the pedagogical museum serves as a catalytic connecting link between the general population and the most advanced knowledge of that technology.

The pedagogical exhibits in agronomical subjects are of direct importance for improving the knowledge of farmers, and of strengthening the farmers' interest in and acceptance of technological innovations. The same staff which manages such an agronomical program in a pedagogical museum would also naturally be responsible for demonstration and experimental work performed in rural areas adjacent to the city.

Just as the pedagogical museum pertains to agriculture's needs, it pertains to the industries of the region.

In the same way, the pedagogical-museum staff responsible for exhibits concerning the development of the concepts of composition of paintings and music are properly responsible both for educational programs in those fields, and for coordinating musical, and other related cultural activities in the theaters and so forth situated in the same general educational zone of the city.

Around this, the development of the educational zone as a university follows.

In turn, in the same general manner illustrated by these samplings, the educational zone penetrates deeply into every aspect of the life of the city and surrounding rural area.

The educational zone developed around the kernel of the pedagogical museums is not merely a teaching machine. It is a research activity. The production performed in the industry and agriculture of the surrounding region, added to experimental workshops, becomes the laboratory of practice for much of what is studied and taught. To give vitality and direction to this process, the educational zone of a new city must be engaged in some aspect of scientific research which is of world importance.

Herein lies a vital principle of development.

The development of "developing nations" demands escape from a national self-image of assimilating *only* technologies previously developed by other nations. A modern nation has achieved true sovereignty in spirit only if it achieves excellence in some important aspect of

advancement of human knowledge generally. A people which can point to several institutions of its own nation, and can identify several important contributions to human knowledge associated with such institutions, is a people which knows that its children are capable of equaling in importance to humanity the children of any other nation.

Otherwise, as we have indicated earlier, true knowledge is not a collection of "facts" and "formulas." Each scientific revolution, we noted, supersedes whole masses of supposed "facts" and adored "formulas" of the previous period of scientific achievement. What endures in value once an old science has been overturned by one or two subsequent scientific revolutions, are not the "facts" and "formulas" associated with that old development of science. What survives are *the principles of successful discovery* by which successful successive scientific revolutions were accomplished.

To teach science is to teach the principles of discovery. To teach discovery, one must experience and know discovery as one's own experience of achievement. What is important in a truly great scientific institution is not *what* it discovers, but that it *does* discover. It is that latter which imparts vitality to an institution.

In the same sense, we make a mistake if we imagine that the development of the productive powers of labor to a certain degree is a matter of the specific facts and habits of practice which the workman has learned. There could be no more certain cause for costly failures in an industrial plant than a labor-force whose abilities are limited to what facts and habits of practice they have learned. The first variation from the conditions of production consistent with such limited facts and habits, and such workmen would stubbornly fail to perform successfully.

The secret of production is the disposition and capacity of the ordinary workman to innovate successfully. The workman innovates on the basis of a certain level of experience, training, and developed skills—that is true. However, he innovates from that starting point of reference. He does not innovate to change the product in defiance of quality specifications. He innovates to overcome those variations of the conditions of production which prevent him from achieving the prescribed quality of result merely by standard, learned methods and procedures. He innovates to bring the result into agreement with the prescribed quality. Without that disposition and competence for innovative problem solving by the workman, a firm cannot hope to compete successfully.

The essence of the development of the productive powers of labor is the development of a disposition and capacity *to discover*, and to recognize what is and what is not a valid discovery. As mankind progresses from a relatively lower to relatively higher level of productive powers, the essential feature of the change is *an increase in rigorous powers of discovery*.

The great obstacle to be overcome is exemplified by the hypothetical case of the farmer who refuses to improve his methods of production, arguing that he adheres to the methods used by "my father and his father before him." Unfortunately, such obstacles are not merely hypothetical. This is the problem we must overcome. We must break through such walls of stubborn adherence to habits just because they are habits, and impart to the individual a sense of discovery, of progress.

The stratum on which that effort is focused with the greatest relative degree of success is the children and youth. If the children and youth assimilate the notion of progress, of discovery, that will aid greatly in moving their parents to acceptance or at least toleration of changes. The emphasis must remain on the fact that two generations of youth must be educated before the baggage of generations of illiteracy and oppression can be made a mere memory of the past.

The new city, developed around the organizing influence of its educational zone, is the machine for effectively transmitting development to both urban populations and into the surrounding countryside.

The Role of the Elite

The term "elite" too often signifies a privileged caste, a caste which gratifies its personal greed at the expense of society more generally. The alternate significance of "elite" is a dedicated body of servants of society, a stratum of persons who have been developed in knowledge and moral outlook to approximate the qualities Dante Alighieri describes in the "Paradise" canticle of his *Commedia*. It is of that latter variety of "elite" we speak now.

The continuing essential problem of organizing society into forms fit for human habitation is centered in a predicament examined most closely—in extant literature—by Plato and Dante. The human population exists in a condition of assortment of its members among three categorically distinct varieties of moral world-outlook. From the lowest to highest of these three ranks, Plato's Socrates borrows from a Phoenician myth to label the three respectively *bronze*, *silver*, and *golden* souls. These are, respectively, the essential moral outlooks Dante treats successively in the "Inferno," "Purgatory," and "Paradise" canticles of his *Commedia*. If for no other reasons, the treatment of this problem by Plato and Dante would prove them the two greatest known masters of statecraft in literature today.

The lowest moral level of humanity, the *bronze* souls, the inmates of the "Inferno," is characterized by those persons who have rejected the moral implications of individual mortality. They flee into hedonism, governing their conduct by the persuasion expressed by Thomas Hobbes,

that society is a state of "war of each against all," each seeking momentary gratification of what he perceives at that moment to be his "inner psychological needs." Since the hedonists reject any rationality above the dictates of pleasure and pain, as do Bentham, John Stuart Mill, and the modern existentialist and structuralist ideologues, they are *willfully irrational*.

This willful irrationality is what is termed "human nature" by the British. It is their, British nature, but it is not human in a *moral* sense of human.

The highest level of humanity, the *golden souls*, the inhabitants of "Paradise," are those who have accepted fully the implications of the moral reflections on mortality. These persons do not locate their self-interest in their mortal passions; they locate their fundamental self-interest in the development and implementation of their powers to bequeath a benefit to the span and duration of posterity. They defend a self-interest of their individual persons only as that person's development and capacity to act for posterity's benefit is the mortal instrument of their higher self-interest. They act in the realm of the living mortals, but their identity is located in the span of the generations of others like themselves in dedication, who have preceded them and who—if humanity does not destroy itself—will come after them to continue that work.

In between these two conditions, and sharing a contradictory portion of the qualities of each extreme condition, one finds the majority of the moral citizens of a civilized nation. On the one side, their hedonistic side, they are motivated from moment to moment chiefly by pursuit of desire for what Dante describes as "earthly paradise." Their day to day goals are their passions, their desire for status, and so forth. Yet, unlike the irrational, immoral British, these citizens are constrained by conscience to wish to do nothing contrary to reason, nothing contrary to the well-being of their posterity.

The associated flaw of these residents of "Purgatory" is that they are what Friedrich Schiller described as "little people." Their knowledge is focused upon their immediate family, neighbors, and friends, upon their success in employment. Fixed principally on such little matters, their minds are made too small to encompass important matters of policy. What they do not see or feel in their immediate environment, they do not know, and they are generally incapable of thinking further ahead in time than a relatively short distance beyond the tips of their noses.

They are intent to be rational and moral, but their minds are too shrunken in scope of interest to assimilate any but the smallest facts. Hence, they are ignorant of morality in a rational form. They know morality chiefly as precepts which they have assimilated into their consciences, precepts which are the shadow of morality, but not its substance.

Concerning strange and distant affairs, they are predominantly ignorant, incapable of assimilating as beyond the little matters which concern them in day-to-day practice. Therefore, concerning things they do not know, which appear strange to them, or which occur in distant places, their opinions are echoes of the most recent gossip they have learned from a person they consider a friend or whom they consider to represent importance, authority.

A society based predominantly on citizens who correspond to that state of Purgatory may survive and progress, on condition that the "important personages" to which the little people look upward for authoritarian gossip on distant and strange matters are themselves properly informed, or those persons esteemed to be important are members of the elite stratum of residents of "Paradise," are *golden souls*.

As Plato emphasized, the possibility of establishing and maintaining a successful democratic republic required that the republic be guided by the influence of a dedicated elite of *philosophers*, by the *golden souls* of Socrates' Phoenician myths. The moral forces of society must predominate over the immoral hedonists, which requires that the *silver souls* be guided on strange and distant matters of policy by the influence of the relatively tiny elite of *golden souls*.

Such a golden soul is both a *patriot* and a *world-citizen*.

A golden soul must be an unswerving *patriot*, since the only effective instrument for self-government of mankind is the sovereign nation-state. He must defend his own nation-state's sovereignty and true self-interests at all costs. There his principal duty to humanity is concentrated, and the principle of the sovereign nation-state must be defended in each national republic's instance on behalf of the defense of this principle for the sake of all humanity.

A golden soul is also a *world citizen*. It is among the generations of *golden souls past and future, as well as present, that the golden soul* finds his or her own primary, higher personal identity. From this vantage-point, the development of all peoples, all individuals, is his or her responsibility. Each sovereign nation-state is, in that respect, his or her responsibility, just as the development of new sovereign republics where none exists is his or her duty.

There is no conflict between these two commitments.

The *idea of a conflict* is a product of the pernicious influence of British irrationalism. To British philosophy, as to the vile Milton Friedman, a nation is merely a collection of individuals, which ought to tolerate the burden of no higher common moral purpose than the "free market" in hedonistic pursuit of heteronomic pleasure and pain. Just as British philosophy defines a nation as a Hobbesian "war of each against all," so that same wicked philosophy defines nations as hedonistic egoisms, "each" implicitly "in war against all." Hence, for wicked philosophers,

such as those, the interest of the state is whatever capricious whim has episodically seized the impulses of this or that ruling circle of a nation, and patriotism in such a nation is dutiful service on behalf of that whim.

With the true republic, matters are defined differently.

All nations are properly under natural law. If republics are wise, they construct their constitutions in such a fashion as to create powerful hindrances against the imposition upon the state of some wicked episodic whim of a ruling circle or a misguided electoral majority. A state ordered according to natural law has no conflict of fundamental self-interest with any other republic ordered according to natural law.

A true republic, as President Charles de Gaulle defined a proper republic of France, constitutes itself not as a collection of individuals, but as a nation ruled by a perception of and commitment to some special contribution to humanity as a whole. Through such a state, the individual citizen's efforts are provided efficient expression as a contribution to the moral purpose of his or her nation. Otherwise, the function of the republic is as we summarily described it earlier.

The development of Africa, like the successful establishment of the federal constitutional republic of the United States during the last quarter of the eighteenth century, requires two special forces working on its behalf. It requires a commitment by an international network of persons at least approximately *golden souls* who are dedicated to the successful outcome of the undertaking. It requires, in Africa itself, a force akin to Benjamin Franklin's fellow-conspirators inside the American colonies and young republic. This latter must be a developed republican elite, akin to and part of the international network which aids its enterprises.

The development of such an elite for Africa requires an ongoing process of development of promising youth, youth detected to be potential candidates for the future generation of Africa's *golden souls*. These must be educated according to the same principles we have indicated for the work of the Academy form of the proposed new cities of Africa. By developing in them the outlook and other qualities they must in due course impart to others, we produce the elite needed for the successful development of the new cities.

At present, Africa suffers from the fact that too many of those young persons going abroad for education prefer to remain abroad. Three measures are needed to shift such a trend.

1. Rather than permitting continued emphasis on the notion that the best education is to be found abroad, we must develop several of the best educational institutions in the world in Africa itself. The process of development of several new cities is the optimal circumstance for situating several of the needed qualities of universities in

the educational zone of areas in the process of being developed as new cities.

2. There must be a concerted effort to recruit members of a future elite from among Africans resident abroad as students or young working professionals.
3. A unifying conception of the exciting development of Africa, a sense of the privilege of performing a part in this development, must be developed and promulgated as a means of rallying talented persons, that it will be a more worthwhile and joyful thing to build new nations in Africa than to pursue the dubious "earthly paradises" offered in jaded, morally decaying pleasure-pens of Europe and North America.

These three points are, of course, an underlying theme of this present report.

5.

The International Monetary Obstacle

New World Economic Order is perhaps an adequate name to identify the variety of *practical results* we are dedicated to achieving. Unfortunately, the discussions of *economic* agreements frequently overlook one rather important point.

A nation, such as the Federal Republic of Germany or Japan, discussing economic development projects with developing nations, creates in some degree a spectacle like that of a man and a woman condemned to separate prisons, proposing marriage to one another. The discussion of the marriage itself must not ignore the point that there are other matters than marriage to be considered.

The obstacles to economic development are not *economic*. The obstacles are *monetary*. The obstacles are not, however, monetary difficulties in and of themselves. Such difficulties could be solved between cooperating nations. The chief obstacle to economic development is *powerful combinations of monetary institutions*. These institutions, which are dedicated adversaries of a new world economic order, have placed themselves above the power of sovereign states, both industrialized and developing. They possess so, and exert consistently, the power to intervene into both the relations between, and internal affairs of nations, to transform one bilateral North-South economic agreement after another into sheer empty rhetoric.

We shall never achieve a new world *economic* order unless we establish a *new world monetary order*.

The two decades of negotiating a new world economic order under United Nations' auspices have been two decades of miserable failures for precisely this reason. The difficulty inherent in any negotiation under the auspices of the United Nations Organization is that that organization as a whole has been dedicated to the *institutional authority* of the IMF, World Bank, and allied international monetary entities. Although a few

courageous spokesmen of developing nations have attacked the policies of such monetary institutions on the floor of the General Assembly, so far the majority among developing nations' members of the UNO have refused to attack jointly these institutions themselves.

Consequently, whatever the rubric adopted for discussions, whether Development Decade or New World Economic Order as such, there have been only two important exceptions to a policy of de facto submission to continuing antidevelopment policies of the leading international monetary institutions. Those two notable exceptions are Colombo, Sri Lanka, during August 1976, and the more recent Havana resolution of the nonaligned nations. These are the only two occasions on which a body representing numerous developing nations has adopted a resolution which attacks the core of the continuing problem of neocolonialism, the policies of dominant international monetary institutions.

The result of this feature of negotiations under UNO auspices: two decades of such discussions have been conducted on the premises of variously explicit or efficiently implicit submission to the conditions of authority of such monetary institutions. Thus, all agreements reached under such auspices have been at best empty rhetoric, resulting only in a wretched degree of token amelioration of the conditions wrought by continued neocolonialist policies.

We must concede that there has been limited success in movements toward development of some of the developing nations during the past two decades. These are exceptions which prove the rule. These exceptions have been the consequence of successful bilateral agreements between individual industrialized nations, on the one side, and either individual developing nations or groups of developing nations, on the other side. Although a few, relatively incidental projects funded by the World Bank have been contributions, most have been *intentionally* failures. Whether under UNO auspices, or under auspices of the IMF, World Bank, or Bank for International Settlements, all negotiations for development have been overwhelmingly a miserable failure on all points but fine-sounding, but practically empty rhetoric.

In general, the reasons for the predominant failure of both developing nations and their sympathizers among industrialized nations is a fearful delusion of this form: "We dare not attack the IMF, World Bank, or Bank for International Settlements. We must work within the system they define. We must find some way of reaching economic agreements which solve the problem without offending those monetary institutions by a frontal confrontation with either those institutions or their policies." That has been the axiomatic basis of *monetary* policy for all of the more general discussions of *economic* policies under UNO and related auspices. Any such discussion of economic relationships between northern

and southern regions must be a wretched failure from the outset to conclusion. The reasons for inherent failure are properly and usefully described as *axiomatic*.

There is a strong *industrialist* impulse for economic cooperation from among some of the industrialized nations. This impulse is clearly manifest, but manifestly in increasing conflict with the policies of the hegemonic monetary institutions. This set of conflicting impulses within the industrialized-nation sector is not only important, but absolutely crucial for defining *an effective policy to replace the axiomatically incompetent policies inherent in past approaches under UNO and related auspices*.

Highlights of the Conflict in Impulses

We noted above that there have been some important steps of substance toward progressive economic development of developing nations during the past two decades. As we noted, these occurred predominantly outside the framework of the UNO and related institutions, as bilateral agreements.

The impulse of President Charles de Gaulle's proposed relationship to the francophone nations of Africa is exemplary of such bilateral impulses. In the Middle East and in such instances as Brazil, the Federal Republic of Germany's industrialists and allied bankers (such as the late Jürgen Ponto of the Dresdner Bank) have acted with the consent of or through their government to foster excellent elements of development. Japan has been important in this picture.

Recently, in the context of the cooperation between President Valéry Giscard d'Estaing and Chancellor Helmut Schmidt, which has been strengthening since 1977, President Giscard has employed the term "Grand Design," referring to the seventeenth-century policy-proposals under that name first promulgated by France's Henri IV and revived by Leibniz. "Grand Design" means that the industrialized nations committed to economic development of developing nations should each seek sponsorship of some region of development, as typified by de Gaulle's adoption of France's responsibility to aid the development of the francophone nations.

The sponsoring nation and its industrialized-nation partners in such a Grand Design work together, to develop all of the nations, with the sponsoring nation acting as the lobby for its special friends among developing nations within the partnership as a whole.

In practice, this means that a developing nation presents its proposals to one of its sponsors in the Grand Design partnership, and that that sponsor is responsible to aid the developing nation in securing the

specific technologies required from among all the nations of the partnership.

For example, at this moment, France is the special friend of Mexico's development within the European Community.* Although the sovereign republic of Mexico is free to deal independently with anyone it chooses, Mexico could reasonably expect that the government of France would attempt to assist it in securing favorable treatment from among other members of that community.

For example, both France and Germany are special champions for the development needs of Saudi Arabia. Germany has a special historical commitment for leading development projects in Egypt. France has a leading commitment to francophone nations. And so forth and so on.

It should be emphasized, that in such cases of bilateral trade and development efforts, the impulse in favor of economic development of developing nations from the side of industrialized nations has been supplied either by entrepreneurial forces within such a nation, or by a corresponding impulse of national interest by the government. The industrialists of the Federal Republic of Germany and the trading companies of Japan typify the entrepreneurial forces. De Gaulle typifies the indicated impulse of national interest.

In the case of the Soviet Union, the cooperation with India from the time of Pandit Nehru is Moscow's best performance on this point.

Although one might hesitate to apply the epithet *entrepreneurial* to any expression of Soviet impulses, one can rightly and prudently say that this is an *industrial* impulse within the Soviet state sector—as distinct from the rather different foreign-policy impulses of the old-Comintern-oriented IMEMO faction. In that sense, the *industrial* impulse exhibited most notably in the case of India makes the Soviet case comparable to and coherent with the entrepreneurial impulse from the indicated industrialized capitalist states.

This distinction within Soviet impulses as a whole is shown to be an important one by the fact that the IMEMO-centered forces of the Soviet Union and Comecon are oriented toward London and the IMF, relative to the European Monetary System, whereas the Soviet state-sector's impulses, as reflected in such instances as the May 1978 protocol of President Brezhnev and Chancellor Schmidt, are oriented toward cooperation with the economic and monetary policies of the Giscard-Schmidt alliance.

This is analogous to the fact that although Chancellor Helmut Schmidt is a representative of the Social Democratic Party of the Federal Republic of Germany, his policy-impulses in economic matters are

* Since the election of François Mitterrand as France's president this is emphatically no longer the case.

directly opposite to that of the Socialist International of Willy Brandt, Olof Palme, Bettino Craxi, et al. It is not coincidental that the IMEMO-centered forces of the Comecon are allied in policy with Willy Brandt's Socialist International on monetary and coherent political policies, or that the Brandt North-South Commission was launched openly as a vehicle for propagandizing the neo-Malthusian monetary dogmas of the World Bank's Robert S. McNamara.

We cite these distinctions for the Soviet and Socialist International case to emphasize that the problem here is not one of confronting homogeneous and characteristic policy-impulses of specific industrialized nations. One must emphasize that each of the industrialized nations, including the Soviet Union, embodies directly opposing impulses in this matter. It would be utter incompetence, except perhaps for the case of Britain or the People's Republic of China, to characterize any nation as characteristically *bad* or *good* on the vital policy-issues of development. We are confronted with opposing international tendencies of policy-impulse, which conflict with particular nations as well as among nations.

We must also take into account an additional degree of complication of policy-making on this issue within nations. Since, as we shall show, the forces opposed to economic development of developing nations have predominant control of the major news media of industrialized nations, that antidevelopment faction is able to use those news media and other means to indoctrinate a significant portion of the influential persons and circles whose own organic impulse is in favor of technology transfer. On the opposite side, in the instances a prodevelopment government comes to power in an industrialized nation, forces opposed to that policy join the government to "work within it" for a contrary policy. These forces may therefore give lip service to a policy of development, but make long and sad faces as they recite the practical difficulties which, regrettably, prevent such a policy from being implemented "at the present time."

Therefore, analysis of the problem must take into account not only the fact that leading forces within industrialized nations represent directly opposing policy-impulses; analysis must also take into account the fact that significant portions of forces with prodevelopment impulses may be induced to support policies which negate development, and that opponents of development sometimes disguise themselves by lip service to the rhetoric of prodevelopment postures.

U.S. Policy Impulses

The only principal powers consistently opposed to terminating British neocolonialist policies appear to be Britain and the United States. Granting that the proverbially odd Briton is a decent human being,

there is, admittedly, nothing else which is not wicked in Britain. Appearances aside, there are strong prodevelopment impulses within what could become dominant policy-making forces within the United States. Since this is a fact of considerable practical importance for the development policy of each and every developing nation, it is important to summarily identify that fact here.

The New York Council on Foreign Relations (CFR) is a circle created first as a "colonial branch" of Lord Alfred Milner's Round Table, and developed into its present form of organization during the 1920s, as a "colonial branch" of the London Royal Institute of International Affairs (RIIA). CFR is almost consistently an agent-in-fact for policies developed for the United States in circles of the British monarch's private household. With increasing takeover of major U.S. insurance companies, major commercial banks, and corporations by Anglo-Canadian "off-shore" financial institutions, CFR does appear to dictate the crucial policies and policy-postures of government.

Yet, there is a powerful prodevelopment *impulse* within the U.S. population. This is concentrated among farmers, independent entrepreneurs generally, proscience professional and other technologist strata, moderate trade-union organizations, and others. Numerically, the forces which share such philosophical outlooks aggregate to a majority of the adult electorate, as much as three-quarters of the electorate.

Although the insularity of the American population's experience, especially in contrast to continental Western Europe, tends to foster "isolationist," even sometimes chauvinistic postures among the "American nationalists" philosophically opposed to CFR-centered forces, the "isolationist" impulses of those American nationalists readily become transformed into support for economic development of developing nations. This is an instance in which an apparently strong, but superficial prejudice is in such axiomatic conflict-in-practice with an underlying organic impulse that, under suitable circumstances, the latter demolishes the prejudice.

At present, a highly visible component of President Ronald Reagan's nominal political base is a combination of "Kissingerian liberals" (to give them an easily recognized name) and neoconservatives of the William F. Buckley and Heritage Foundation varieties. The fact that the Heritage Foundation is a wholly owned joint property of British intelligence's Mont Pelerin Society and the London IISS tells us something most significant.

The fact that the present policies of the Heritage Foundation were authored for the United States by the British Fabian Society—which coordinates the Mont Pelerin Society—tells us a great deal more. The Heritage Foundation and Buckley varieties of neoconservatives (the U.S. version of the "new right" of Europe) are effectively intelligence

operations, not products of mass-based domestic U.S. ferment. Their influence, although prominent, is shallow and propagandistic, rather than an adaptation to the actual philosophical outlooks of the majority of the Reagan political base. Furthermore, the influence of this sort of element is highly exaggerated by both the U.S. news media generally and the radicals and radical-tending liberals of the United States.

The essential feature of the November 1980 U.S. general election is better reflected presently in the Agriculture and Interior Departments of the Reagan administration than the Haig-led State Department, run predominantly by holdovers from both two Kissinger administrations and the Carter administration. Despite the administration's relative submission to the ideological influence of monetarist "free trade" dogmas, the administration and the majority of its electoral base are committed to *reversing the past fifteen years' neo-Malthusian trends*, and to reestablishing the United States as a leading force for technological progress.

The general problem of the United States' foreign policy, from the vantage point of developing nations, is that although the prodevelopment impulse is based in an overwhelming majority of the electorate, this majority has been effectively fragmented, to the point that it has exerted no consistently concerted influence within either major political party or within the government over the recent decade and a half (most emphatically). This impulse has lacked an established national spokesmanship to bring it together as a political force, and to shape U.S. domestic and foreign policies according to the indicated prodevelopment impulses of that majority. So, a British-influenced minority, centered around the New York City financier community, has exerted an effective dictatorship over a majority aggregating to approximately three-quarters of the electorate.

Every person competently informed of even the rudiments of American history knows that the American Revolution was fought against the policies of the British East India Company, a force which controlled the British monarchy then, and which controls the monarchy, under altered names, today. Contrary to the liar Walter Lippmann, it is also known that the 1823 Monroe Doctrine was an affirmation of an anticolonialist policy, directed consciously against British operations in Latin America, as well as Britain's Hapsburg Holy Alliance accomplices. It is known that President Abraham Lincoln represented the same anticolonialist, anti-Britain policy most vigorously—up to the instant he was assassinated by the assassin from the British Secret Intelligence Service, John Wilkes Booth.

Since the influence of Admiral Mahan, a fanatical admirer of Britain, and President Theodore Roosevelt, it appears that the United States has become a "dumb giant" directed by "British cleverness." After Theodore

Roosevelt, President Woodrow Wilson was a fanatical anglophile, as were the Republican successors to President Warren Harding, Calvin Coolidge and Herbert Hoover. In foreign policy, Harry Truman was manipulated successfully by Britain, through Secretaries of State James Byrne and Dean Acheson. President Eisenhower did assert U.S. independence of British policies on several important occasions, but he had John Foster Dulles, Allen Dulles, and Fabian-trained Arthur Burns, to undo most of the good Eisenhower would have otherwise accomplished.

President John F. Kennedy entered office as an accredited anglophile, educated at the London School of Economics, his father's family intermarried into the notorious Cecil family of Britain, and President Kennedy virtually a distant cousin, through his sister's marriage, of Prime Minister Harold Macmillan. Yet, President Kennedy affirmed Eisenhower's anti-British action of establishing the National Aeronautics and Space Administration, and when, after the 1962 Missile Crisis, he opposed British strategic adventurism, he was assassinated by a de facto arm of British intelligence, Permindex.

President Johnson bent to British instructions on all crucial matters of domestic and foreign policy. Nixon's independent impulses were efficiently ruined by the combination of such pro-British influences as Henry Kissinger and Arthur Burns. Burns wrecked the dollar, and Kissinger played a decisive initiating role in setting Nixon up for "Watergate." Gerald Ford had a few good moments, to the pleasant astonishment of many of us, but Kissinger (in particular) was too much for the better impulses of a nonelected President such as Ford to overcome. Carter was probably close to clinically insane, but this did not hinder his being the most pliable tool of London on all matters of both domestic and foreign policy.

One might be sympathetic, even though disagreeing, with the perception of developing-nation leaders who view the United States as almost hopeless on the issue of neocolonialism. Even the better-informed leader of developing nations might propose, on the basis of the history we have summarized, that if any twentieth-century President of the United States, beginning with the assassinated President William McKinley, were to oppose British policy, that President would be automatically assassinated by some new "lone assassin."

Admittedly, the only known case in which any successor of President McKinley directly opposed British policy is the case of President Franklin Delano Roosevelt during World War II. The internal features of this particular case are of obvious value to the developing nations' leader who wishes to assess the possibility that the United States might revert to an eighteenth and nineteenth-century U.S. policy of hostility to British-style neocolonialism today.

President Roosevelt's attack against neocolonialism is summarized

best in a short book *As I Saw It*, published immediately after the Second World War by the President's son and wartime personal aide, Elliott. There is ample corroboration of young Roosevelt's report, apart from the actual language of conversations included in the book itself. The fact that Roosevelt's proposed policies were directly opposite to those of every predecessor (possibly excepting Harding) since the assassination of McKinley, and the fact that these proposed anti-neocolonialist policies are opposite to those pursued by the United States over the period up to the Reagan administration, would make the younger Roosevelt's book of extraordinary importance in itself. Once we examine the characteristic features of Roosevelt's proposals, the quality of importance increases.

The difficulty of locating copies of this important book outside a few depositories is in itself a reflection of the book's importance. The initial publication of the book was met with a violently libelous assault on both the book and its author by London and London's accomplices inside the United States. With some difficulty—considering the widespread popularity of the Roosevelt name at that particular time, the British and their accomplices succeeded in halting further publication of the text, and in gradually burying memory of it among all but a relative few over the later years.

The features of the book which were most infuriating to the British were young Roosevelt's eyewitness accounts of conversations between President Roosevelt and Prime Minister Winston Churchill at the so-called Atlantic and Casablanca conferences during the course of the last war. The general point made to Churchill by President Roosevelt was that the United States was not entering World War II to "save the British Empire" again, as the United States had done under Wilson during the First World War. Roosevelt stressed that the time had come to rid the world's affairs of British "eighteenth-century methods." Both the colonialist system and world domination by British monetary policies were to be dismantled at the close of the new World War. The liberated colonies and semicolonial nations were to be developed economically by "American methods," in the tradition of the industrial development of the United States under the policies of George Washington, Monroe, John Quincy Adams, and Lincoln.

To illustrate postwar U.S. policy, at Casablanca President Roosevelt produced a map of Africa, and personally instructed a reportedly apoplectic Churchill in the means by which the Sahel region was to be transformed into the high-technology agricultural "breadbasket" of the continent.

It should be clear that Roosevelt's conception of development was not that of some half-educated, well-meaning political leader attempting to convince the British to support development. Not at all. Roosevelt

understood clearly and correctly that there could be no economic development without first crushing both the British and the influence of British doctrines of political economy. The United States enjoyed a position of overwhelming preponderance of power in the imminent postwar world, vis-à-vis a British power in greatly reduced circumstances. The relatively crushing power of the United States was, according to President Roosevelt, going to force the British to bend their knees to American policy. British "eighteenth-century methods" (Adam Smith et al.) would be replaced with principles of industrial development embedded in the philosophical outlook of the United States in the course of the 1776 to 1783 period of continual actual or threatened military conflict with Britain.

The Current Situation

At this moment of writing, President Valéry Giscard d'Estaing of France and Chancellor Helmut Schmidt of the Federal Republic of Germany are engaged in a most perilous effort to implement what is sometimes termed "phase two" of the European Monetary System.

This was first proposed publicly at the July 1978 "Bremen Summit" meeting of the European Community, where it was jointly proposed by President Giscard and Chancellor Schmidt (with accompanying outcries of protest and consternation from British circles). What is termed "phase one" of that proposal, called the European Monetary System (EMS), is of course, in place, since it was fought into implementation in the winter of 1978-1979. The second phase, the European Monetary Fund (EMF), was postponed, under heavy adversary pressures, during the course of 1979. Recently, French spokesmen, including Treasurer Haberer, revealed publicly indications that that postponement was about to be ended.

Following the announcement of reactivation of the EMF, or "phase two" effort, the first effort to implement this phase took the form of the joint negotiations of Giscard and Schmidt with Saudi Arabia. Immediately, the cats, dogs, and other species of the opposition set up a howl of public protest. The rallying-point for the opposition to Schmidt on this issue in the Federal Republic was the Social Democratic head of the Bundesbank Karl-Otto Poehl. It was made clear that Poehl was echoing not only the ideological dogma of the Fabian Society's Mont Pelerin Society, but also the majority of the Basel, Switzerland Bank for International Settlements, which has emerged as the center of the efforts to sabotage Giscard's and Schmidt's efforts.

The original intent of Giscard and Schmidt, concerning the Saudi

Arabian investments, was to denominate the deposit of those investments in ECUs (European Currency Units). The ECU is the currency of account (deposit) for the European Monetary System. Although the opposition was not strong enough to force Giscard or Schmidt to cancel the agreement with Saudi Arabia, the opposition, led most visibly at that moment by Poehl, did succeed in sabotaging the plan to denominate the deposits in ECUs. Schmidt assigned the deposits to the Kreditanstalt für Wiederaufbau, the continuing form of West Germany's postwar reconstruction fund, which has some of the features of a national bank.

Chancellor Schmidt's action has two leading implications. One of these has very direct bearing on the creating of the conditions for technology transfer. The other may appear to bear only indirectly on technology transfer, but is nonetheless of absolutely decisive importance for making a new world economic order possible.

The effect of depositing Saudi deposits in the Kreditanstalt not only weakens the relative power of a private institution, the Bundesbank, over government domestic and foreign policies. It creates a two-tier credit system in the Federal Republic, favoring investment in the production of useful goods over nonproductive investments. If Schmidt were to expand the capacity of the Kreditanstalt in that fashion—an action for which he has the support of the official organs of both industry and trade unions—a profound change would be effected for the better. That change, assuming that President Giscard is reelected in the coming "second round" of the elections in France, would come close to ensuring the early establishment of "phase two" of the European Monetary System.

Although this has only indirect bearing on the matter of North-South technology transfers, that connection is almost decisive. How that would be decisive, we shall demonstrate later in this section of our report. For the moment, it is sufficient to note that it represents a step toward the establishment of a new monetary institution, appropriate in form and policy to the furthering of greatly expanded technology transfer.

The second feature, with more direct bearing on the emergence of a new world economic order, is the fact that this arrangement with Saudi Arabia is integral to qualitatively increased purchase of advanced technology from France and the Federal Republic by that nation. A poorer nation may object that Saudi Arabia is a relatively rich nation, in terms of its petroleum-income balances. Nonetheless, that shift in itself tends to reverse recent trends (since the overthrow of the Shah), back toward emphasis upon North-South technology transfer. What Saudi Arabia has the means to begin may well spill over as similar benefits to nations lacking such relative means.

This is particularly to be emphasized: Insofar as OPEC nations use the deposit facilities of EMS technology-exporting nations and Japan in

connection with both their own purchases of technology and as places of deposit for their unused funds, this has the effect of directly and substantially increasing the credit-issuing capabilities of "second phase" institutions of the European Monetary System. Were the United States and Japan to participate in and support such an arrangement, this would bring the world at least halfway toward the establishment of a "second tier" of lending of the sort which is an indispensable precondition for a new world economic order. Only the step of reorganizing the outstanding foreign indebtedness of developing nations need be added to establish, then, all of the indispensable preconditions for a new world economic order.

Without such steps of monetary reform, or the equivalent, no new world economic order is possible. Without such monetary reforms, every UNO resolution for improving the condition of developing nations is merely empty rhetoric.

Chancellor Schmidt is the head of government of a nation which must dedicate approximately 40 percent of its goods-output to export of technology. Japan's situation is analogous. France is growing in importance as a technology-exporting nation; the fruit from the tree planted by Charles de Gaulle grows larger and more abundant.

Excepting Japan's exports into the internal market of the declining economy of the United States, the net exports for this group of nations as a whole are limited to the Comecon and the developing sector. The Anglo-American efforts (aided by General Harold "Kim" Philby's KGB and elements of Israel's Mossad) to destroy Iran, coincided with related and other actions to force an accelerating collapse of the developing-sector nations' technology imports. London, in *de facto* alliance with forces including Willy Brandt's Socialist International and Brezhnev's factional opponents in the Comecon, has attempted to force the eruption of a renewed "Cold War" between the United States and Soviet Union, which would create the political conditions forcing not only Japan but Western continental Europe to curtail exports to the Comecon.

We do not suggest that pure and simple economic interest motivates France, Japan, and the Federal Republic to assist the developing nations in receiving technology. Both France and Chancellor Schmidt have emphasized a moral commitment, which is unquestionably a sincere impulse. Schmidt has emphasized that destabilization of the developing sector is a principal route to increased threat of general warfare. Schmidt is entirely correct on this point, just as he is entirely correct in viewing interlinked East-West and North-South economic cooperation as the only durable pathway toward peace.

Nonetheless, for the purpose immediately before us here, it is sufficient to concentrate on the narrower economic motives involved, to demonstrate that even the lowest moral motives of intense greed by industrial-

capitalist states could not possibly account for the past decades' pattern of effective sabotage of significant technology transfer to developing nations as a whole.

Not only is it evident that Giscard and Schmidt, among other industrialized-nation statesmen of that persuasion, have correctly perceived the most vital economic interests of their own nations on this point. The evidence is overwhelming and conclusive: There is no industrialized nation (excepting the formerly industrialized nation of Britain) which does not share that same interest.

To the extent that the policies of any such nation are a reflection of its *industrial-capitalist character*, every such nation must be in favor of establishing the kind of new world economic order, and associated monetary arrangements, under which technology transfer *for viable development projects* in developing nations is facilitated with long-term credits at nominal borrowing costs.

In all but a handful of the numerous discussions of a "new world economic order" which we have audited or otherwise examined from the period of the recent two decades, we note the most interesting fact: that the implications of what we have just stated went entirely unmentioned, except at the cited Sri Lanka and Havana nonaligned proceedings of 1976 and 1979 respectively. This focuses our attention on not only the *axiomatic* follies inherent in known discussions under UNO auspices, as we noted earlier. Now that we have put the question of self-interest of industrialized nations in the form we have just summarized, another leading question of great practical importance presents itself.

The second question which appears to have escaped the attention of nations discussing a new world economic order is this:

What sort of self-interest is it, which impels the governments and banking systems of industrial-capitalist nations to persist so long and so emphatically in imposing upon the world, as Britain and the United States have done, policies in direct opposition to industrial-capitalist interest?

Why has the United States, in particular, forced policies in direct opposition to the most fundamental interests of France, Japan, the Federal Republic of Germany, Italy, Sweden, Denmark, and so forth—as well as to the most vital interests of the United States' presumed clients and presumed friends in the developing sector? Why has the United States persisted in policies which are in fact in such direct opposition to the most vital economic interests of the United States as an industrial-capitalist power?

Why has it not been noted in public statements concerning a new world economic order, or in negotiating this matter under UNO auspices, that the continuing policies of Britain and the United States have

been consistently opposed to the most vital interests of industrial capitalism? It is perhaps the case that the myth that "imperialism" springs from industrial capitalism has been exploited so successfully in the London School of Economics' indoctrination of developing-sector students, that adherence to that myth blinds them to a fact so simple, and of such devastating importance, as this fact we have just underlined.

If the United States and Britain are in fact industrial-capitalist nations (or, that Britain was prior to the ministries of Callaghan and Thatcher), then it must be the case that their foreign policies are a reflection of *some powerful anticapitalist interests*. The evidence would permit no other conclusion to an educated person considering the matter.

Where, then, does this powerful, anticapitalist influence reside in the world? Is it Britain, perhaps—which usually deserves a large portion of the blame for most of the great wickedness humanity has endured over the course of the past two centuries? Britain is a part of this powerful anticapitalist force—at least, those ruling financial interests intersecting the circles of the monarch's private household. We must acknowledge the point that the Bank for International Settlements, based in Basel, Switzerland, was created under the sponsorship of Genoese (Italy) financial institutions at the close of World War I (as an instrument to administer the Versailles treaty's side-effects in world finance). Britain is an important element of the powerful anticapitalist force, but it is not a force confined to Britain by any means.

If we list and examine the policy-making forces behind the anti-industrial-capitalist policies imposed upon U.S. domestic and foreign policies during the recent decade and a half (to be specific on this matter), we discover a most interesting international network of financial institutions.

A large portion of this network is based in the "offshore," unregulated financial institutions of the British Commonwealth. The Canadian insurance-banking complex is a major component of this element of the network, and among the most significant in studying the systematic foreign subversion of the United States. So are the historic opium-trafficking financial centers of Hong Kong and Singapore. The British West Indies is another key part of the Commonwealth portion of this network.

That network of Commonwealth "offshore," unregulated financial institutions is coordinated globally by both the City of London and by the less-publicized, but historically and currently most significant Edinburgh center.

Scottish-border finance has been Genoese since the Genoese puppet, Robert Bruce, came to power in that country during the early fourteenth century. London was consolidated as a Genoese financial center with the accession of James I in 1603. The Genoese, who took over British

credit in 1603, substantially through their branches in the Netherlands and elsewhere, proceeded from initial tax farming under James I and embezzling Chancellor of the Exchequer Francis Bacon, to create the British East India Company, which controlled Britain throughout the eighteenth century and into the nineteenth century, until the relationship became diversified under more numerous covers. Edinburgh and London are historically Genoese financial centers, a historic connection which defines those centers' character and policies to the present date.

The financial interests controlling Britain are historically and currently overlapped with the outgrowths of the Dutch East India Company, which has the same Genoese parentage as the Edinburgh and London financial centers.

Both the British and the Netherlands elements are linked historically to the Genoese financial center of Geneva.

Venice and Genoa are the keys to the development of the overall networks in Europe, and to the radiation of those networks from Europe into the Commonwealth and the Western Hemisphere generally. The network does not originate with Venice or Genoa, but was transmitted (and later transferred) into Western Europe by the faction of Byzantium which created both Venice and Genoa as colonies. Although Venice and Genoa were noted competitors at various times of the past, this was intramural throat cutting. The principal families of both cities were already significantly intermarried by the close of the thirteenth century.

In addition to the extensions of Venetian and Genoese networks already noted, Austro-Hungary was a Venetian plantation, and the Hapsburgs were Venetian agents from the close of the thirteenth century. Although Maria Theresa and Joseph II require (and deserve) a distinct classification, the Hapsburgs are Venetian in political character to the present day, as are numerous oligarchical families of the Austro-Hungarian Empire, many of whom were originated by awarding of *markgraf* titles to members of Venetian and Genoese oligarchical families, and some of which, like the Kalergi, were of Byzantine oligarchical origins. The role of the Hapsburgs in leading Belgian financial institutions of today is an expression of the interconnection of the Venetian plantation of Vienna to financial networks which otherwise have a more immediately Genoese pedigree.

There are numerous other elements worth listing under other circumstances, but those identified are sufficient to indicate the general outlines of the network we have to consider.

The following further bit of summary historical background aids in appreciating the character of this network down to the present day. This history is essential to understanding what may seem to ordinary, moral persons an incomprehensibly evil philosophical outlook characteristic of the objectives and policies of the network at the present time.

The Origins of Colonialist Policies

In Italy itself, the oligarchical forces associated with the Venetian-Genoese faction are usually termed today "the black nobility." This term is derived from the designation "Black Guelph," which came into currency during the lifetime of Dante Alighieri. The designation "Black Guelph" signified the separation of what was then known as the Guelph aristocracy of Italy into two opposing factions. Dante was a leading spokesman for the "White Guelph," and his opponents were the Black Guelph faction directed by Venice.

This Venice-centered network has a long and evil record in nearly a millennium of European history, and a major role in most of the crises which both Europe and the Mediterranean region have suffered since the twelfth century.

For example, Venice's oligarchy was the intelligence service for Genghis Khan in the Mediterranean and Europe. (It was under the auspices of his family's established connections with Genghis Khan's family that Marco Polo traveled to and lived in China for a period.) It was the Venetians who performed a decisive role in shaping the Mongol invasion and destruction of the decayed remains of the Arab Renaissance.

For example, it was Venice and Genoa which defeated the Hohenstaufen and forced the abdication of Alfonso the Wise in Spain. It was Genoese and Venetian agents, deployed under the cover of priests, who organized pseudo-Christian (the flagellants) and other cults among the illiterates of Europe during the late thirteenth and fourteenth centuries. It was Genoese usury, typified by the banking houses of Bardi and Peruzzi, which pyramided debts of feudal potentates, causing the economic collapse of the fourteenth century.

We should expand briefly on this, since the world is confronted with an identical danger, which is from historically the same source, at the present time. In the record of the late thirteenth and fourteenth centuries, leaders of developing nations can discover an exact model of reference for the mechanisms by which famine, epidemic, and regional destabilizations are being introduced to those nations today.

How was it accomplished, that the flourishing nation of France (for example) of the early thirteenth century, suffered during the late thirteenth and fourteenth century a reversal of technological progress previously effected, and a depopulation—through famine, regional feudal wars, and successive layers of epidemics—from which France did not recover its former population-levels until the eighteenth century?

The Venetians and Genoese organized a proliferation of feudal wars.

Exemplary: through seizure of the Papacy, the Venetians arranged to have the Pope donate the throne of Naples to an heir of the British

royal family. It happened that the throne of Naples was then occupied by an incumbent, who objected with a forceful royal means to the attempt to accomplish his abdication. To occupy the throne, the King of England would require an army and logistics.

The Genoese, who had arranged this conflict, cheerfully offered to finance the military expedition—at usurious rates. They took as security the annual wool production of England. When the loan came into default, the Genoese rewrote the loan on the basis of both principal and unpaid interest, and added their usurious rates. This time they added as security, the sheep of England. In the second refinancing, they added the sheep-lands of England as security to the wool crop and the sheep. This continued until a subsequent repudiation of England's debt to the House of Bardi—but not before the Genoese flag of St. George had been implanted, to this day, as the flag of the royal house of England.

The efforts of feudal potentates to pay the debt service on such usurious loans resulted in "austerity measures" against feudal towns and estates. The holidays of the peasants of feudal France were reduced. The number of peasants was reduced, so that more of the annual yield was available to the landlord for debt-service payment. The reduced number of peasants on estates were forced to increase the portion of their labor given to work on the landlord's land, and increased exactions were imposed on the peasants otherwise.

This had two kinds of effects. As the market towns collapsed, displaced town populations were added to the mass of former peasants driven from estates into vagabondage. This led an eruption of epidemics and banditry. The intensive cultivation of estates, curtailing land improvements to increase product temporarily, resulted in a weakening of the fertility of the land. Epidemics erupted in the wake of checkerboard famines in various parts of Europe so affected.

Feudal wars intensified, as desperately indebted potentates sought to alleviate their own financial condition at the expense of their neighbors. In this circumstance, the cults were added to the difficulty, spreading madness to compound the internal breakdown of society.

Wave upon wave of epidemic disease culminated in the Black Death—the bubonic plague, which is estimated to have killed one-third of the population-levels surviving the genocidal effects of preceding economic devolution.

In that, in a very compact summary, we have an exact replica of the policies being deployed by the modern heirs of that same network.

Fortunately, the collapse of Genoese banking—caused by the total collapse of the monetary system of Europe during the fourteenth century—was seized as the occasion for Dante Alighieri's faction to gain power in a number of regions of Europe, and to launch the Golden Renaissance from those centers. In this, the authors of the Golden

Renaissance were allied with and assisted by the Paleologues of Constantinople—a faction directly opposed to the Byzantine faction which had created Venice and Genoa.

Unfortunately, the Genoese and Venetian forces were not wiped out. They were able to reconsolidate their power, and to regain a great deal of that former power beginning the last decades of the fifteenth century.

The decisive success for the Venetians and Genoese was their key role in deploying Muhammed the Conqueror, head of Turkey, to conquer Paleologue Constantinople. The Venetians and Genoese supplied Muhammed with cannon and artillerymen. A 4,000-member force of Genoese mercenaries, nominally defending Constantinople from within, opened the gates they were supposed to be guarding by night, admitting the Turkish forces. This weakened the economy of Europe and also weakened the flanks of the Paleologues' allies in Italy greatly.

With this advantage, the Genoese moved in on the Spanish monarchy of Ferdinand and Isabella, taking over control of Spain entirely with the death of Ferdinand, and placing the Genoese-Venetian puppet, Charles V, on the throne of Spain. The hideous genocide in sixteenth-century Mexico, during which the population was reduced from over 20 million to less than 2 million, was the direct result of Genoese policies of looting, and was a calculated genocide presaging the doctrines of the Club of Rome and allied forces today.

The efforts of the same Medici forces which sponsored Leonardo da Vinci and Niccolò Machiavelli, to develop Francesco Sforza, restrengthened the forces of the Golden Renaissance within Italy for long enough to assist in training and bringing to power France's Louis XI. Unfortunately, as Louis XI expressed his fear on this point, his son and heir lacked the necessary qualities. The follies of France under Louis XI's bungling successors, permitted the forces of da Vinci and Machiavelli to be defeated by combined Venetian and Spanish infantry power, following the death of da Vinci's and Machiavelli's successor-protégé to Francesco and Ludovico Sforza, Cesare Borgia.

The destruction of Rome by Venice's puppet, Charles V, the Hapsburg emperor and king of Spain, enabled Venice to seize control of the Papacy and launch both the Reformation (Luther) and the so-called Counter-Reformation. From the middle of the sixteenth century, until the French and English defeat of the Hapsburgs in 1653, Europe underwent approximately a century of a "little new dark age," a nightmare culminating in the ruinous Thirty Years War of central European history.

To understand the nature of the modern form of the Venetian-Genoese network, we must at least briefly characterize the main sweeps of history from the fifteenth century to the present. This suffices to the practical purpose of showing two things. First, we must account for the inability of the Venetian-Genoese network to fully reconsolidate its

fourteenth-century degree of power until its accelerating efforts to that purpose over the course of the present century. Second, it aids in understanding the extent and character of the enormous and evil power that network exerts over so much of the world today.

This, we emphasize, before proceeding to that brief outline of the sweep of European history today, is the name and identity of the enemy forces. This is the powerful, supranational, anticapitalist force responsible for the monetary policies crushing the developing sector today. It is this powerful, evil force which must be defeated before any new world economic order can be brought into being.

Despite the limited scale of success of the Golden Renaissance, the establishment of France under Louis XI as the first modern sovereign nation-state so tipped the balance in Europe that it has not been possible for the Venetian-Genoese enemy forces to attempt to fully consolidate their power at early fourteenth-century levels until recent decades.

With the success of Erasmus's allies in England, in establishing the world's second modern nation-state there under Henry VII, there emerged in both England and France an allied force. This was known during the course of the later sixteenth and seventeenth century as the *commonwealth* faction, centered, until Henri IV's death at the hands of a Jesuit (that is, Venetian) assassin, on the French royal house of Navarre. This commonwealth faction was the major force of that period for forces of the Golden Renaissance heritage throughout Europe. It was otherwise known in France as *les politiques*, and included Cardinals Richelieu and Mazarin among its leaders, as well as Mazarin's successor, Jean-Baptiste Colbert.

We have earlier outlined leading connections of the English Commonwealth Party and French *politiques* to Leibniz's networks throughout Europe, to the American Revolution, and so forth. That aspect of the matter at hand we need not repeat at this point.

Overall, the Venetian-Genoese effort to launch a repetition of the New Dark Age during the sixteenth and seventeenth centuries was largely a net failure from the Venetians' strategic standpoint.

That effort, to launch a repetition of the destruction of society effected during the late thirteenth and fourteenth centuries, was named the *Counter-Reformation* and had two principal objectives. These objectives were: to destroy the Commonwealth Party forces centered in France and England, and to reverse and eradicate the Golden Renaissance of fifteenth-century Italy. Although the Genoese succeeding in neutralizing Elizabeth I from 1589 onwards, and in bringing James I, their puppet, to the throne of the newly created British monarchy, they failed to crush France. The failure to defeat France during the first half of the seventeenth century, prevented the Venetians from achieving a decisive strategic victory—despite the reconquest of Britain in 1660.

Despite the 1815 Treaty of Vienna, the successful defeat of Britain's

last effort at military reconquest of the United States in 1863, and the rise of Germany as an industrial power, brought the Venetian-Genoese asset, Britain, to the brink of threatened global defeat at the close of the nineteenth century. By the close of the nineteenth century, an alliance of international forces centered around French minister Gabriel Hanotaux was in an objective position to defeat Britain globally and decisively.

The developments of the late nineteenth century, leading into this turn-of-the-century conflict of supranational forces, are key to understanding both that conflict and the leading practical features of the present struggle for a new world economic order. To put it otherwise, the leader who is not acquainted with this history and its implications for the present, is stumbling blind as a man struggling to survive in a dark room, in attempting to determine against whom and with whom he must act.

Next, we summarize the Hanotaux combination, and after that, summarize the Ruskin-Rhodes-Milner policy which defeated Hanotaux and which has predominantly shaped the main issues of twentieth-century history to date. That will bring our focus back to the current situation from this brief, but indispensable glance at the history of the current problem.

Hanotaux was the central figure in a global network of efforts including Count Sergei Witte of Czarist Russia, the Meiji Restoration forces in Japan, influences in Germany, and the anti-British President William McKinley in the United States. The adopted strategic objectives of this Hanotaux-centered effort included the launching of the "New China" movement, the accelerated industrialization of Russia, and the defeat of the British in South Africa.

This was not an alliance of nations, but an alliance of forces which shared a common policy, and which at that moment, happened to be in power within the relevant nations. The British and their Venice-centered allies also had powerful forces within those same nations. The Meiji Restoration faction was temporarily displaced from government in Japan; British-Venetian forces undermined the Witte forces in Czarist Russia. British and Venetian influences in Germany broke the alliance with France and Russia. McKinley was assassinated. Hanotaux was toppled.

The British Problem

Since approximately 1773-1815, the ruling British oligarchy has commanded the principal contingent of the deployable forces at the disposal of the Venetian-Genoese network as a whole. It is for such reasons that we say or write that "The British did . . ." such-and-such, when our

meaning is action of a larger network, of which the British are a keystone force.

Let us emphasize, to be understood exactly on this point: Our usage of the term "British" is never merely symbolic, hyperbole, or metaphor. We never use that term except to identify the British literally. The point being stressed is, that to mean that the British are explicitly, literally responsible for most of the wickedness afoot in the world today, does not mean the British are *exclusively* responsible for that evil. They are responsible as a most visible part of a Venetian-Genoese network.

Correspondingly, to uncover a person as a British intelligence asset in this or that country does not necessarily mean a person who likes Britain, or who wishes to strengthen the British nation's objective power in the world at large. A British intelligence asset may hate the British nation, despise British subjects generally. Very often, a person is an asset of British intelligence only because that person is an adherent of the larger Venetian-Genoese network of which the British oligarchy is an element.

British means the ruling oligarchy of Britain and the rentier-financier forces of that oligarchy. This oligarchy means old Venetian and Genoese families from the vicinity of the Scottish border, such as the Percys and Howards. It also includes the relatively upstart aristocratic families, whose titles were purchased (often with Genoese financial backing) from Henry VIII. It means the circles of aristocracy and finance which are associated with the private household of the British monarchy, where the direction of British intelligence, of British finance, and British Commonwealth capabilities is located.

British may occasionally include the British Parliament. It must be understood that the British Parliament constituted in its modern form by the seventeenth-century accession of the House of Orange to the British throne, is predominantly John Locke's clown show, a low musical-hall performance designed to divert, and render impotent and relatively pacified, all restive political impulses within the sheep-like ranks of British subjects generally.

The private household of the monarch has very efficient control over this parliamentary version of musical-hall performances, including direct control over the party whips. Otherwise, British Members of Parliament have been notorious as being purchasable at relatively the lowest cash-price, since before Lord Shelburne purchased the Parliament, with British East India Company funds, to place and maintain William Pitt the Younger in the long-term position of prime minister.

If one wished to make a precise distinction in terminology between the real government of Britain and the parliamentary charade, one might be obliged to employ the appropriate vowel-shift, and to designate the parliamentary regime as *British*.

British signifies a governing policy as a whole which is shaped chiefly by a cabal of executives of family funds centered on the oligarchy of Venice and Genoa. Additionally, *British* often signifies more specific policies which the same international cabal has shaped, and even executive actions taken on orders of the inner circles of that international cabal.

To trace out the evolution of modern versions of Venetian-Genoese policies within Britain itself, two points of mid-nineteenth-century reference are more or less sufficient. The first point of reference is the work and influence of the British East India Company official John Stuart Mill, already cited. The second is the Pre-Raphaelite Brotherhood centered around Oxford University's John Ruskin and Cambridge's Benjamin Jowett. It is the overlap of these two influences, especially in the British Fabian Society and the Socialist International, which is the key point of reference for understanding the twentieth-century policies of Britain itself.

To trace out the development of British-state foreign policy into and during the present century, the most efficient pathway is that from John Ruskin, through his protégé Cecil Rhodes, and into the circles of the executor of Rhodes's testament and estate, Lord Alfred Milner. This defines the successive institutions of the 1890s and twentieth century known as the Coefficients, the Round Table, and the London Royal Institute of International Affairs (Chatham House). (The New York Council on Foreign Relations is a leading colonial branch of the Ruskin-Rhodes-Milner entity.)

As Sidney Webb emphasized correctly, the essential feature of the writings of John Stuart Mill is that they outline a Benthamite method for mass manipulation of populations. That is the significance of Mill's doctrine of political economy, a mere facet of Mill's hedonistic doctrine of social manipulation as a whole. The irrationalist, utilitarian doctrine of Mill, Jevons, Marshall, and their successors, is predominantly a tactic for brainwashing of populations through the popularization of ideas which will cause the believers to become complicit in destroying their own economies.

The work of Mill and Ruskin overlap in both the development of the British Fabian Society, and in the British collaboration with the Jesuit order to create the Socialist International, around a unification of British (August Bebel) and Jesuit (Lassalleans) socialist organizations in Germany. (By "Jesuit" one means the Venetian intelligence-service entity created in Venice during the sixteenth century, which was otherwise the intelligence service of Venice's client, the Hapsburg monarchy.)

To clear up any doubts concerning the Socialist, or Second, International. The variety of socialist which collected around August Bebel during the 1860s and 1870s was under the control of the British and

Hannoverians, and embodies, correspondingly, an echo of British liberalism mediated in large part through the network of British-guided neo-Kantians associated with Friedrich Lange. Eduard Bernstein exemplified this before, during, and after his association with Friedrich Engels. Ferdinand Lassalle, Bebel's chief socialist competitor, was financed by a leading Jesuit, von Kettler, the putative founder of the doctrine of "solidarism." Lassalle's movement reflected this patronage in both the specifics of Lassalle's *realpolitik* tactics and the specific doctrines of his faction. The Gotha unification of 1875 became the seed-crystal for parallel and integrated combinations to the same effect in other parts of the world, creating the Socialist International as a result. To understand this adequately, it is sufficient to understand British socialism from the vantage-point of John Ruskin.

The essence of Ruskin's viewpoint and work was his utopian commitment to return civilization to a state of affairs modeled on the medieval beliefs and institutions which Ruskin attributed to the late thirteenth and fourteenth century of central Europe. Choosing the School of Raphael as the embodiment of the fifteenth-century Golden Renaissance, Ruskin and his collaborators named the little conspiracy they formed the Pre-Raphaelite Brotherhood. Ruskin's writings and lectures on art were an expression of his fanatical determination to discredit and crush every artistic heritage of the Golden Renaissance, and to degrade the principles of every branch of art to hedonism.

Politically, as distinct from art matters narrowly defined, Ruskin hated the two principal institutional outgrowths of the Golden Renaissance: the modern sovereign nation-state and industrial capitalism. He sought a "return" to a "simpler life." This was to be a loose confederation of feudalistic, oligarchy-ruled fiefdoms globally, in which arrangement the classes of the population outside the ranks of the ruling oligarchy would be organized in "guilds." This, in essence, was the content of Ruskin's notion of "guild socialism." This is the operational feature of British socialism generally to the present date.

It is false to imagine that there is any conflict between the variety of capitalism espoused by the City of London financial center and British socialism. The rubric "capitalist" as properly applied to the City of London and British monarchy, is the capitalism of the fourteenth-century Genoese usurers, such as the Bardi and Perruzzi. It is not the industrial capitalism rooted in the sixteenth and seventeenth century successes of the commonwealth factions of France and England. It is a notion of "capitalism" as old, at least, as the tax farmers of ancient Babylon. It is *feudalistic rentier-finance*.

It is to be granted that the British have adopted certain degrees of industrial capitalism. The British oligarchy has occasionally fostered such developments reluctantly, and only when a period of cumulative

technological stagnation threatened to make Britain helpless against more technologically advanced foreign states.

It was, for example, the defeat of allied forces by French forces under Lazare Carnot during the 1790s which prompted Pitt et al. to mobilize Britain for a period of forced-draft industrial development during the period until the close of the Napoleonic Wars. After the 1815 Treaty of Vienna, Britain consciously and vigorously suppressed both science and industrial development at home.

During the late 1820s and 1830s, William Babbage was deployed by one faction in Britain to set off alarms. Babbage and others warned that there was only one person in Britain who could even follow the mathematics of the science being developed then in such various places as the United States, France, Germany, and Russia's Petrograd. Oxford objected strenuously that Britain did not need either science or further developments of industrial technology. The alarmists carried the day; the British Association for the Advancement of Science (BAAS) was formed, and British spies began collecting science and new technology from the United States (Joseph Henry's work as plagiarized by Michael Faraday) and continental Europe.

At the close of the nineteenth century, facing a threat from the industrial developments of the United States, Germany, Russia, and Japan, Milner's circles dragooned Britain into an industrial mobilization to prepare for an impending war Britain was to organize on the continent of Europe.

The so-called Boer War illustrates the situation of British military capabilities at the close of the nineteenth century. The British navy of that period was an archaic collection of obsolete and decaying old ironclads, better suited to sink than to fight. The British land forces initially deployed into South Africa used *rifles without sights*, and fired those rifles without aiming, in a continuation of eighteenth-century musketry volleys. It was almost as if the British had learned nothing from the skirmish line of the American Revolution, Carnot's military reforms, Scharnhorst's emulation of the Carnot reforms, or the entire military history of the Napoleonic Wars and later nineteenth century.

The principal character of the Boer War was a bloody meatgrinder, in which incompetent British infantry wore down their adversaries by sheer, overwhelming numbers. In this meatgrinder, Britain shaped the land forces it was preparing to deploy for the coming war on the continent of Europe.

It is also relevant that one of the steel plants closed down by the recent outburst of austerity in Britain was the original nineteenth-century Bessemer steel facility, which had been in continued operation into the 1970s!

British political economy, to the extent that it retains any vestige of

a rational basis, is essentially *physiocratic*. The British, rejecting on feudalistic principle the constitution of a society dedicated to technological progress, have always defined wealth as the Venetians have done. They define wealth as something looted from nature, chiefly mining and agriculture. British rentier-finance defines profit as *ground-rent*. Profit, in the British system, is either ground-rent extracted from tenants as the right of the feudalistic landowner, or the equivalent of ground-rent, extracted in the form of debt service.

The difference between the British political economy of Adam Smith, David Ricardo, et al. and the earlier, cruder Physiocrats, is that British political economy found itself obliged to extend the principles of ground-rent to industrial production.

The basis for such an extension of the physiocratic doctrine to industry is the fact that any industrial society in a state of zero growth produces no actual net profit. The only form of profit which can be extracted from such an industrial society is the form of profit which Karl Marx and Rosa Luxemburg termed "primitive accumulation." Elements of C , V , and d are reduced to paid values below the cost of reproducing those elements. The amount gouged from the costs of reproduction is thus turned into money-profit. Such modes of extracting profit are entropic, of course. Any economy in a state of zero growth is an economy embarked upon a downward, devolutionary spiral.

Irrational policy? Absolutely. However, it is the axiom of the doctrine of hedonism to be irrational. No consideration of reason must deny the individual the freedom to act according to his or her momentary impulse of perceived psychological needs. British philosophy since Bacon and Hobbes has been fanatically anarchistic, hedonistic. Only the perception of momentary pleasure or pain in localized interpersonal transactions is recognized as a valid premise for policies of accommodation among conflicting individual interests in society.

Ruskin et al. fanatically insist upon a "return" to the "simpler way of life" of the late thirteenth and fourteenth centuries. No consideration must stand in the way of reaching that feudalistic objective but tactical considerations. That is the essence of the matter.

This applies to the old colonialism of the British East India Company as well as to the neocolonialism of British policy today.

Is it to be proposed seriously that the British leading circles of the late eighteenth and early nineteenth centuries did not know that the source of wealth is development of the productive powers of labor? The case of British East India Company official David Ricardo suffices to prove that they knew this fact rather well. Therefore, from the standpoint of British knowledge, the sensible approach to the colonies would have been to increase the wealth available to Britain by increasing the prosperity of those regions. The problem was not that the greedy British did not

desire increased wealth, but that they, as a branch of the Venetian oligarchical network, hated the technological advancement needed to increase wealth far more than they admired increased profits.

The driving force behind British colonial policy before, and British neocolonialist and neo-Malthusian policy now, is a fanatical, cult-like commitment to a feudalistic ideology. It is only from that standpoint of reference that Venetian (including British) policy can be understood.

The Venetians were aware that zero technological growth meant a reduced potential relative population-density no later than the initial development of the Malthusian dogma by Giammaria Orte of that city. The British are equally aware of this connection. If, they argue, the development of a feudalistic sort of one-world utopia reduces the size of the population which can be sustained, then the population must be reduced to those proportions.

This is key to the seeming paradox of Friedrich von Hayek. Hayek, a Vienna-trained ideologue in the worst sense of that epithet, is a senior official of the (socialist) British Fabian Society. He is also the senior figure of the (presumably arch-capitalist) palpably fascist Mont Pelerin Society of Professor Milton Friedman et al. There is no actual contradiction in this circumstance, nor in the fact that the anarchosyndicalist Socialist Party of Italy produced from among its leaders the fascist Benito Mussolini, or the new "Il Capo" emerging from the same Socialist Party of Italy today, Bettino Craxi.

To achieve its feudalistic utopia of deindustrialized, zero-growth society, the Venetians must not only savagely reduce the present human population in the order of billions of persons. British socialism must create mass social battering rams against the institutions of both the sovereign nation-state and industrial capitalism. The British and Venetian oligarchs behind such socialist enterprises remain firmly capitalists—of the feudalistic, rentier-financier variety, the feudal-landlord variety. Yet, vis-à-vis industrial-capitalist and nationalistic forces, the same British or Venetian capitalists are fanatically socialists. They are "guild socialists" in respect to the ordering of society they offer to the nonoligarchical classes of their utopia. They are, in other words, socialists to the exact same degree they are fascists.

The significance of *Fabian* in the name of the Fabian Society, is the British decision to employ the tactics of Fabius Maximus against what? Against the forces of socialism, as credulous dupes have been induced to believe? Not at all. It was the British and Venetians who created the radical upsurge of the 1840s, just as the British oligarchy itself had created the Chartist ferment in Britain. Heinrich Heine was absolutely correct on this point, according to modern research into primary sources.

The British had no fear of the socialism of the 1840s and its outgrowths. They (and other Venetian forces) had created it, owned it

"lock, stock and barrel," and controlled it from the top. When Karl Marx's protechnology impulses could no longer be tolerated, they dumped him into isolation and impotence respecting the socialist movement of his times, dissolved the "first socialist international," and proceeded to create the new Socialist International by way of Gotha, snickering at Marx's inability to secure even the slightest recognition for his objections.

It was not against the "onrush of socialism" that the Fabian Society was established. It was established as a Fabian tactic against the *onrush of industrial revolutions in the world about them*: the United States, Germany, Japan, Russia, and so forth. The cultivation of a socialist movement was but a secondary, if tactically important feature of the overall deployment.

This does not signify that the Bolshevik state was a British creation, or that the British have been able to control efficiently the evolution of socialist organizations set into motion by the Venetian network generally. Manipulation of any sort is manipulation of *human beings*, who have real interests and real wills of their own. A person in a socialist organization who has an organic patriotism, and organic commitment to technological progress, will define *his socialism* as patriotism and a struggle for advancement of technology. The British are well aware of this, and usually contrive to discredit and isolate a potentially influential spokesman for such viewpoints before he or she can become a major problem. Sometimes, as in the case of V. I. Lenin, the Venetians are taken by surprise, underestimating the stubbornness of the potential danger represented.

That not unimportant qualification taken into account, to the extent that Venetian networks control socialist movements—and they efficiently control most of today's top down—those movements are merely social battering-rams deployed against industrial capitalism, and for destabilizations of sovereign nations or particular governments the British wish to assassinate in that manner.

Otherwise, the essence of British socialism and its likenesses is a Fabian's commitment to Ruskin's goal of a *neo-Malthusian world-federalism under the rule of a feudalistic, rentier-financier oligarchy*. Whatever beliefs the socialist dupes of the Fabians may acquire, such beliefs are variously promoted or tolerated by the Fabian controllers to the extent that they are perceived either to cohere with, or not to endanger the fulfillment of, the mission the controllers have assigned to the dupes.

From early during the period following the 1815 Treaty of Vienna, the principal adversary targets selected by the Venetian networks were the United States and Czarist Russia. Now that we have outlined the rudiments of the Fabian and Round Table elements of British policy,

we can focus on the principal features of the past century's history. This brings us to an understanding of the present strategic situation.

The discovery, by Babbage and others, that Leibniz's science colony at Petrograd was more advanced than the British science of the 1820s and 1830s, exemplifies the reasons for the continuing British operations against Russia from the middle nineteenth century to the present date. The advancement of science in Russia coincided with a growing, and increasingly efficient Czarist commitment to industrial progress over the course of the middle to close of the nineteenth century.

The Crimean War, organized by Britain in collaboration with other Venetian forces, was one expression of the global operations which the British conducted against Russia under the rubric of "The Great Game" throughout most of the period following 1815.

This hatred against Russia reached a point of frenzy in 1863. Abraham Lincoln concluded an alliance with the Czar, to the effect that the Czar dispatched Russian fleets to both San Francisco and New York, and threatened to make war on any European power which sided with the Confederacy. Lord Palmerston and Lord John Russell (Bertrand Russell's grandfather) held a rug-chewing fit in London on receipt of this information. At that point, Britain most reluctantly abandoned its 1783-1863 continuous policy of military reconquest of the United States.

From that point onward, the subversion of the United States and the destruction of Russia were the key strategic commitments of British policy—to the present day.

The events of the nineteenth-century industrial revolutions reached a crisis-point for Britain during the 1890s. In response to this crisis, the group around Lord Alfred Milner defined the main lines of British strategic policy, centered around Milner's and Mackinder's elaboration of what has become known as the "geopolitical doctrine."

The immediate expression of the danger confronting the British was the networks of alliance and cooperation organized by French Minister Gabriel Hanotaux. Hanotaux had developed close cooperation with Russia's Count Sergei Witte, the leading spokesman for the accelerated industrial development of Russia. Both worked to bring the industrialist forces of Germany into the alliance, as well as the Meiji Restoration forces of Japan. In the United States, the dedicated enemy of Britain, President William McKinley, provided the other crucial element of the pattern.

One of the leading by-products of this cooperation was the creation of the "New China" movement. The forces behind the Meiji Restoration were keenly aware of the evil consequences of the mandarin ideologies of "Old China," and the natural convergence of such mandarin ideologies with British objectives for the Far East. So, the "New China" movement was launched, calling to the attention of urban Chinese the

shamefulness of not following the Japan model of industrial progress. This was a key part of the effort to throw the British out of the Orient.

The main thrust of the alliance centered upon Hanotaux was the accelerated industrial development of Russia, as the key to accelerating capital stocks turnover and technological progress in the European nations which were to supply the bulk of new technologies to Russia: France and Germany. Unfortunately, excepting Rapallo impulses during the period of the Weimar Republic, this thrust of Hanotaux's was aborted, and not to be resurrected until the establishment of the Fifth Republic of France under the leadership of Charles de Gaulle.

Milner's group adopted a two-level policy for dealing with the respective short-term and medium-range dangers to Britain.

The short-term objective was to break up the alliance of industrial-capitalist forces, and to set the allies of Hanotaux against one another.

This was a feasible objective, as events proved to be the case. The governments which were engaged in cooperative opposition to British policies were not without important opposition within their own countries. By destabilizing those governments, with aid of the opposition forces, ally could be turned into enemy, and some among Britain's adversaries into Britain's allies and accomplices.

President William McKinley was assassinated, by an anarchist assassin sent from Europe, and deployed for the assassination from New York City's Henry Street Settlement House, a key British intelligence safe-house in that city under Emma Goldman's direction. Through anti-Witte forces in the Czarist court and the opponents of the Meiji faction in Japan, the alliance between Japan and Witte was transformed into the Russo-Japan War. The Dreyfus affair in France, a frame-up against Dreyfus arranged with aid of an Austrian (Venetian) agent, produced hysteria against Germany, and brought down Hanotaux. Venetian assets in Russia exploited the circumstances of both the Russo-Japan War and an international economic crisis orchestrated by the City of London, to launch a Menshevik revolution in Russia. The Baku oil fields were destroyed, Russia's industrial momentum was more or less reversed, and Witte's faction was finished.

The medium-range task adopted by Milner's group involved the accelerated subversion of the United States, but centered immediately on the objective of the mutual destruction of Russia and industrialized Germany. The Venetians organized alliances among Britain, France, Belgium, and Russia, against Germany, Turkey, and Austro-Hungary. Germany was intended to bleed itself half to death in destroying Russia to the east, and then combined British, French, and Belgian forces were to move with comparative ease into the Rhineland, from which point to dictate the deindustrialization of Germany as well as the dismemberment of Germany-conquered Russia.

The relevant German forces were not blind to such impulses of British policy. The Schlieffen Plan, in particular, was developed as a program for just such a contingency. It was not Germany's interest, Schlieffen et al. understood, to pursue an adversary relationship with a France with which Germany wished to ally. In the event of a British-French-Belgian alliance against Germany, the military objective was to bring about an early peace with France.

To accomplish this, German forces must crush the British expeditionary force in Belgium and Normandy, and bring France militarily to a condition of seeking armistice in the course of the same unified German military action. Since modern military science since Carnot and Scharnhorst is essentially logistics and counter-logistics, each armed with a deadly point, the key to forcing France to armistice lay in the configuration of northern France's rail network. The appropriate "Dirichlet cut" would solve that military problem.

The British, being both irrational and nasty but brutish military specialists, overlooked the obvious feasibility of measures along the lines of the Schlieffen Plan. It is notable that the same strategy was deployed by German military forces in 1940. The British have an astonishing proclivity for stubborn folly in matters including the rudiments of military science. So, instead of Germany's bleeding itself to death in the east, with a temporary military stalemate on the western front, the Schlieffen Plan was executed simultaneously with the thrust eastward.

World War I would have been won by Germany at the outset but for a piece of political idiocy in the German command. It was desired to have a certain pompous figurehead bear the honor of the final attack to bring France to armistice. So, the German advance was delayed until this personage could be brought into the place of his waiting command! This delay in completing the final slice of the decisive cut gave the French command precious time to improvise a filling of the gap. With that, the long meatgrinder of the war in the west began.

From the British standpoint, the outcome of World War I was a failure. The key to the failure was the developments in Russia. The Venetians had misestimated V. I. Lenin.

Part of the plan for World War I was the British project which later emerged under the title of the "Parvus Plan." This involved a proposed replay of the Russian 1905 revolution, deployed a developed capability constructed around elements such as Parvus's networks, deployed for the 1905 uprising. Venetian agent Parvus (Alexander Helphand), then operating as a part of the Venetian Balkan destabilization operation out of Turkey, was laundered into the confidence of German intelligence, receiving from German intelligence an initial payment of 1 million Reichsmarks for the plan earlier developed in Britain. (Subsequently, Parvus was paid over 30 million Reichsmarks by the German intelligence

for his operations, according to Eduard Bernstein and other figures associated with the Parvus project from the vantage point of social-democratic roles in key positions of German intelligence.) Although the nominal conduct of the plan was primarily German, every phase of the Parvus operation into Russia was assisted by Sweden's Hjalmar Branting, leader of the Swedish social democracy and British intelligence's key resident agent for the Scandinavian "northern route" operations into Russia.

The Venetians had excellent reasons to believe in the success of this planned destabilization of Russia—prior to the dismembering of that nation. Exemplary, later Bolshevik leaders Karl Radek, N. Bukharin, and G. Ryazanov, were among the numerous key figures directly on Parvus's payroll. Radek a longstanding agent of Parvus's. Most of the leading radical figures of Russia were also agents of one or another foreign intelligence service. Lenin was sent into Russia by combined German and British intelligence efforts, on Parvus's recommendation—with 3 million Reichsmarks slipped into Radek's hands for the journey by Parvus. Lenin would be another element of instability added to the implementation of the plan.

Lenin's operations, from April into October, are one of the most remarkable cases for study from the records of political intelligence. He made tools of his adversaries in his own party, among other features of a remarkable series of operations we shall not recount here. This is not to imply that Lenin was a mere "spook," to employ the current age's vernacular for an intelligence operative. His method was essentially to outwit shortsighted adversaries in the guise of his collaborators, adversaries who failed to see far enough or accurately enough ahead to gain a true estimation of the changes in the structure of the mass-situation which those actions, seen one at a time, would produce. Lenin's adversaries were swept up into and forced to adapt to social circumstances and related dynamics which they themselves had been induced unwittingly to catalyze.

The crucial outcome of this, from the British vantage point, was that Russia, although greatly weakened materially by the war and civil wars, had emerged as a nation committed to industrial development. Although this commitment was based on approximately a Marxian policy in terms of nationalized ownership of industry, it was otherwise potentially Witte's Russia in a more effective form vis-à-vis British hopes to undermine and destroy it.

The similarities between Lenin and Witte, from a British vantage point, were underlined most clearly by Lenin's initiative, through his trusted agent Chicherin, in securing the Rapallo agreement. All signators to the Rapallo agreement, excepting Lloyd George, soon died in one fashion or another. The British and Venetians generally were angry.

When the British become very angry, heads of state and government, as well as other public figures, usually die of overt assassinations or in other abrupt ways in wholesale lots—as in 1963, or most recently with the attempted assassinations of President Reagan, President Giscard, and others. Rapallo, in Venetian eyes, was a resurrection of the policies of Hanotaux and Witte.

The British capability of destroying Russia then was considerably hindered, despite Winston Churchill's fanatical efforts, by indications of a threat of war between Britain and the United States, and with the implication that Japan might go to one side or the other of that conflict. Even though the British were soon rid of President Harding, and had British assets such as Coolidge and Hoover in place, the possibility of a new war against Russia during the 1920s had been too damaged during the immediate postwar period to permit its being seriously pursued.

On the British side, the 1920s produced two main policy-developments. We shall continue immediately with the aspect of that leading into World War II, and then return to the second matter.

During 1932, it was the British and Venetian perception that the government of Weimar Germany, under General von Schleicher, was on the verge of activating the Rapallo agreement with Russia, and to orient Germany's nearly ruined industries eastward to save Germany from the effects of the 1928-1931 general monetary crisis. In response to this concern, the British ordered the legal coup d'état placing Adolf Hitler and the Nazi Party into power. From that instant, Britain simply revived its earlier plan for World War I.

Britain supported Hitler through the Munich pact of 1938. During 1939, it became the increasing perception of leading British circles that perhaps they had set a Frankenstein's monster into place. To deploy Germany, British asset Hitler would be required to deploy non-Nazi, nationalist forces of industry and the military, as well as the general population. There were warning signs during 1938, but the Chamberlain policy of supporting Hitler for a drive eastward persisted until the spring 1940 breakthrough to the west, following the Scandinavian operations.

It is merely a curiosity, whether the British themselves created the conditions under which German nationalist influences were able to impel Nazi Germany westward. British thrusts toward military occupation of Norway certainly did provoke the Nazi move into Scandinavia, offsetting Hitler's persisting desire for an alliance with his beloved Britain. The rest of the war is simple, well-known history, except for two critical features of British policy during the course of the war.

In response to a parliamentary question at the close of the war, Churchill conceded that the British government had acted to neutralize German generals' coups against Hitler before Munich 1938 and again

during the war. Churchill's explanation: *His Majesty's government preferred Hitler to the German nationalists.*

The central point of conflict over war policy between Churchill and the United States during the war, was Churchill's determination to postpone the military thrust of the Allies into Germany as long as possible.

The figure around whom this Churchill policy centers is the comic-opera figure of Field Marshal Montgomery. Even by British standards, Montgomery was among the most incompetent commanders ever to achieve celebrity. By all accounts, Montgomery's policy was, as at El-Alamein, to pile up frontal capabilities for a set-piece battle. From the standpoint of military science, this is sheer idiocy against a capable adversary, and disgusting self-indulgence when deployed against a weak adversary who must sit, watch, and wait while such a miserable arrangement is being completed. Montgomery violated every principle of battle-field command of modern military science. Directly the opposite on all crucial points to the excellence exhibited by General Douglas MacArthur.

The build-up of Nazi western defenses over the period 1943 to 1944 attests to the evidence that the U.S. impulse, to conserve capabilities for a 1943 thrust into the Rhineland across the Channel was the correct one.

Churchill cannot be accused of not intending to conquer Germany. Rather, he was committed to forcing both Germany and Russia to bleed one another to death prior to Allied intervention.

The relative strategic capabilities of the Soviet Union after the war ruined key features of Churchill's hopes. With the Soviet Union strong, it was not feasible to crank up the adversary posture between the Anglo-Americans and Moscow, and also proceed with the dismantling of German industry. Churchill, like Bertrand Russell, was publicly for an early "preventive" nuclear war against Russia—as soon as the Anglo-American nuclear arsenal and aerial delivery capabilities could be accumulated to a point of readiness. The "preventive" war was tentatively scheduled for the 1957-1958 period, before, it was initially assumed, Russia would develop the capability to deploy nuclear weapons.

The Soviet Union not only developed fission weapons, but matched the United States in the race to develop the thermonuclear weapon which the British had attempted to prevent the United States from developing. With that latter development, the "preventive war" scheme, called "Operation Drop-Shot," was off as far as the U.S. side of the Anglo-American alliance was concerned.

Out of this shift in circumstances, a new strategic policy was evolved: *mutually assured destruction, deterrence.* Under the cover of "nuclear stalemate," a different sort of strategic warfare would be conducted:

psychological warfare. The Soviet Union—and industrial capitalism as well—was to be destroyed from within. The development of this project in psychological warfare takes our attention back to the 1920s. Once this project and its genocidal implications are seen in the light of what we have outlined so far, the real nature of the monetary obstacle becomes visible. Without this knowledge, the statesman is a man struggling for his nation's life in an unlighted cave.

The Wells-Russell Utopia

The most prominent of the figures of British intelligence behind the present drive toward genocide against billions of persons of the developing sector were Bertrand Russell and the former World War I chief of British foreign intelligence, H. G. Wells. Wells can be regarded as the father of the neo-Malthusian "technetronic age" publicly proposed by Zbigniew Brzezinski during the last half of the 1960s. Russell, together with such accomplices as Robert Hutchins, Aldous Huxley, Julian Huxley, Gregory Bateson, and Margaret Mead, is the spiritual father of today's international terrorism and the rock-drug counterculture destroying many nations from within.

The figure most prominently linking Wells's and Russell's efforts in this project was a figure known as Aleister Crowley, head of the Isis-Urania Temple of Students of the Hermetic Order of the Golden Dawn. This was a psychedelic cult into which H. G. Wells protégés such as Aldous Huxley, Julian Huxley, and George Orwell were initiated as operatives during the late 1920s. Despite their differences, Wells and Russell were effectively collaborators on this matter, and Wells protégé Huxley was among Russell's closest collaborators during the 1930s and into the postwar period. Crowley's operation was an offshoot of Madame Blavatsky's theosophical-anthroposophical cult. Crowley, earlier in the century had invented the project he named the "Age of Aquarius," which Crowley proposed would be a vehicle of Lucifer worship. This bit of background provides the distasteful smell of Wells, Russell, and their works. Now to the substance of this evil business.

During the late 1920s Russell publicly proposed a three-point strategic project. *First*, all progress in scientific discovery must be brought to a halt. *Second*, a broader repertoire of psychotropic drugs must be developed, as a cheap method for mass manipulation of populations. *Third*, the revolution in languages associated with Wycliffe, Dante, Chaucer, Petrarch, and the great fifteenth and sixteenth century classicists must be reversed, to eliminate the habits of rationality embedded in literate languages. This latter was the direct source of the variety of linguistics associated today with such figures as Professor Noam Chom-

sky. It was Russell, working with Karl Korsch, and Rudolf Carnap, who originated this wicked scheme known as linguistics during the 1930s. Chomsky was a direct product of the training program developed at Russell's initiative.

These three points of Russell's program were grafted onto a mass of wicked Malthusian dogmas and racist cultisms festering on both sides of the Atlantic during the nineteenth and early twentieth centuries. The New York City American Museum of Natural History was a gathering place for such racist genocidalists during the 1920s, and continues that role to the present date.

Wells's program differed from Russell's in only one notable respect. Where Russell's program implied the elimination of all technology in his choice of neo-Malthusian world-federalist form of feudal utopia, Wells proposed to keep a certain amount of science and technology stored away in museums, so to speak, for the restricted military and other special uses of the ruling oligarchy. Otherwise, Wells and Russell had no notable differences in the program they offered for the condition of those masses of people who survived a gigantic depopulation effort.

Focusing on the case of the United States, which we know in the greatest degree of detailed investigations, the implementation of the Wells-Russell program has been broadly as follows.

Both Russell and Aldous Huxley were deployed into the United States during the 1930s. Russell linked himself most closely with President Robert M. Hutchins of the British Fabian Society branch known as the University of Chicago. Huxley operated chiefly from California, where he began promoting the use of marijuana and establishing a pioneer collection of cults, including the variety of Zen Buddhism popular among deranged persons in the United States.

After the war, work on the Wells-Russell-Crowley project began in earnest. Through institutions which were U.S. branches of or allied to the London Tavistock Institute, and through seed-conduits such as the Josiah Macy, Jr. Foundation, a complex of research projects was conducted, to the purpose of combining the application of mind-altering drugs with creation of cults. The connection between the use of the mind-altering drug and the creation of the cult was provided chiefly by methods of pseudo-psychoanalytical behavior modification developed by the London Tavistock Institute and its subsidiary, the Tavistock Clinic.

An example of such institutions is the RAND Corporation. The RAND Corporation was the corporate form given during the postwar period to the U.S. Strategic Bombing Survey, an offshoot of the British Strategic Bombing Survey. Both had been dedicated to the use of bombing and other techniques as a method of psychological warfare. Both were, accordingly, projects of the psychological-warfare division

of British SIS, an institution based on the London Tavistock Clinic of Brigadier Dr. John Rawlings Rees and Eric Trist. In the postwar period, the London Tavistock Institute was developed around the kernel of the Tavistock Clinic, as the basis for Sussex University. (Sussex and Tavistock concoct most of the worst evils pouring out of Britain into various parts of the world.) When the RAND Corporation was created out of the U.S. Strategic Bombing Survey, the Tavistock Institute took over direction of the new entity.

Stanford Research Institute, the Institute for Social Research at the University of Michigan, the Lewinite electronics laboratory at MIT, where Chomsky is based, and the National Training Laboratories subsidiary of U.S. Naval Intelligence, are also examples of Tavistock subsidiaries in the United States.

During the 1963 to 1965 period, the drug-and-cult effort passed out of the experimental phase into the large-scale implementation phase, beginning with the issuance of tens of millions of doses of LSD-25 to student populations of targeted universities around the United States. Marijuana, LSD-25, and abuse of legal psychotropic pharmaceuticals became increasingly characteristic features of the life of the "New Left."

During 1965 to 1967, the policy of genocide as U.S. global strategy was first introduced formally as an experimental feature of federal government agencies, especially in the U.S. State Department under President L. B. Johnson. The London Tavistock Institute issued a series of reports under the aegis of LBJ adviser Bertram Gross successfully demanding that NASA and other proscience programs be scaled down. The Club of Rome was launched as a joint Venetian-British effort under the auspices of NATO intelligence. Tavistock-linked ("Russian Studies Division") Zbigniew Brzezinski published his H. G. Wellsian proposal for a "technetronic age."

With Henry A. Kissinger's appointment to National Security Council adviser, he pulled the genocide-planning elements of the federal government into official, operating status. These included the creation of the Ad Hoc Population Group of the National Security Council. In the Department of State, these included: the Office of Population Affairs; the Agency for International Development took over genocide-coordinating functions for its area of activities; the other key genocide-coordinating agency in that department is the Bureau of Oceans and Environment—which interfaces with Major Louis M. Bloomfield's Law of the Sea project at the UNO. (Bloomfield is a senior Canadian member of the British intelligence service, and formerly head of an organization, Permindex, which was expelled from Europe on charges of complicity in repeated attempts at assassination of President de Gaulle. It was also the entity indicted by a Louisiana grand jury in connection with the

assassination of President John F. Kennedy—a trial which was aborted as the witnesses began dying in handfuls prior to the trial date.)

In the United Nations Organization, the entities conducting genocide policies include UNITAR and UNFPA. Organizations associated with the UNO coordinating genocide include the World Bank and the International Monetary Fund.

Subsequently, in the U.S. Congress, two organizations promoting genocide were introduced: the Congressional Environmental Studies Conference, and the Congressional Clearinghouse for the Future.

During 1969, the deployment of Russell's project was qualitatively expanded. Over the end of 1969 and beginning 1970, international terrorism was launched and also the international "environmentalist" movements built out of the shattered relics of the "New Left." Later, with the inauguration of Jimmy Carter in 1977, environmentalism ran rampant, and international terrorism was accelerated to new levels of scope and intensity.

Internationally, the most conspicuous of the institutions deploying genocidal policies include the World Wildlife Fund, the Club of Rome, the Population Crisis Committee, the latter supported by the Draper Fund. The Draper Fund was a creation of an avowed racist and genocidal fanatic, General William Draper. NATO intelligence is also prominent in promoting such policies.

Apart from those institutions which explicitly promote genocidal policies, there are those financial institutions which do so implicitly, but with full consciousness of the genocidal consequences of their monetary policies. These are the monetary policies of the International Monetary Fund, the World Bank, the Basel, Switzerland Bank for International Settlements, and numerous others.

The conscious and efficient effect of the dominant monetary institutions has been, over the course of the past decade and a half, to promote flows of savings and credit into forms of investment which have no productive or other useful function, while strangling the flows of credit and savings to technologically progressive productive investments—outside of the limited area of technological progress defined by Brzezinski's "technetronic age." This is easily done, provided powerful private-banking networks are able to use that power to shape the taxation policies of governments to the effect of favoring nonproductive over productive investments. That is precisely what has been accomplished.

What has occurred as a result is an effect desired in written policy-papers of the New York Council on Foreign Relations and its offshoot, David Rockefeller's Trilateral Commission. This effect is called by CFR "controlled disintegration" of both the world economy and economies of nations.

Once national economies have been brought to the threshold for generalized famine and related breakdown, it requires only an additional squeeze of austerity measures by monetary institutions to begin the spiral of genocide by economic means: famine and resulting fostering of epidemic disease. The addition of regional wars and promotion of recurring cycles of insurrections then intersects with conditions of famine and epidemic to bring about a process in which the populations of entire nations can be reduced to half or less of their former population levels in a decade or two. The promotion of such regional wars in famine-stricken and famine-threatened areas of the developing sector was policy under Kissinger and is the dedicated policy governing the actions of influential officials of governments, the UNO, NATO, and powerful financial interests now.

The Effect on the Strategic Balance

By now, we have demonstrated conclusively our point that it is a worthless exercise in rhetoric to attempt to negotiate improvement in the internal economic conditions of developing nations, or to engage in North-South dialogues on that point, unless the problem of monetary institutions is directly confronted as the first and decisive item of negotiations.

The problem associated with that fact is the protest of the person who argues, "That may be true, but nonetheless, we must secure economic benefits now, without waiting for monetary reform." The emotion, fearful desperation, is understandable. Unfortunately, to negotiate on that wishful basis is like a man telephoning for a parachute after he has fallen out of a plane. One must have the parachute before attempting to negotiate the fall; one must acquire the monetary reform first.

Beginning with the inauguration of Jimmy Carter, in 1977, the British took the gamble of plunging ahead with not only transforming their own nation into a "formerly industrialized nation," but attempting the same general result in the United States as well. Under the austerity policies of Carter and Federal Reserve Chairman Paul A. Volcker, beginning October 1979, the goods-production sector of the U.S. economy collapsed approximately 20 percent during 1980. Unless Volcker's policies are reversed, the goods-producing sector will collapse approximately an additional 25 percent before the end of 1981.

The only result of this collapse of the U.S. economy which worries the British and pro-British leading financiers and policy-making circles is the recognition that the NATO nations are losing the logistical base needed to maintain an approximation of strategic parity with the Soviet Union.

Therefore, if they wish to maintain strategic parity, they must either abandon their present monetary and economic policies, or they must effect successive waves of internal destabilization of Eastern Europe and the Soviet Union itself. As the recent instabilities in Poland illustrate, they are desperately determined to accomplish the latter.

There is naturally enough a tendency in Soviet circles to return the favor, a growing temptation, especially since the Polish destabilization conducted chiefly by British (Tavistock) and Venetian (Jesuit) intelligence agencies, to exploit situations within the "West" which will cause a compensating weakening of the West to offset every attempted weakening of the Comecon and Warsaw Pact.

Consequently, the present monetary policies of the Bank for International Settlements, IMF, World Bank, and Paul A. Volcker are leading the world toward a spiral of strategic miscalculations pointing directly toward an otherwise unthinkable consequence, general nuclear war.

Those among us who cannot muster themselves to defeat the British (and Venetians) now are persons who have plainly lost the margin of moral fitness to survive.

This is the general monetary obstacle. If we do not face and crush that obstacle, then we shall not only have no new world economic order, but at best most of our nations will not survive the period ahead.

6.

The Principles of Credit and Taxation

No nation is truly a sovereign state until it governs its own national credit and currency through a national bank under control of the national government. Whoever has the power to regulate the creation of national credit, to judge on what terms and to whom credit shall be extended, and so forth, holds the powers of ultimate life or death of the nation's economy in his hands.

It is true, there are special circumstances under which a concert of patriotic citizens may create a private central banking institution in the national interest. At the worst financial ebb of the American Revolution, a concert of patriotic Philadelphia businessmen did create a central bank for the funding of the continued revolution.

It is true, under certain circumstances, a concert of international private forces might initiate new international institutions to serve the common welfare.

To the extent such private concerns represent right policies, they do in fact serve the national or general welfare. That fact is not to be disputed, nor concerts of private bankers to be deprecated merely because they happen to be such concerts.

There are two problems associated with even the most commendable of private ventures in national central banking and international monetary institutions.

Any such concert, to the extent that it assumes the central banking functions of a nation, or functions as an international monetary institution, has the implicit character of an absolute monarchy. It is accountable to society only insofar as its own perpetuation requires prudence, to prevent concerts of opposing forces from arising to destroy its authority. As a king, such as France's Louis XI or Henri IV, may be in truth a better servant of the national interest than any existing parliamentary body, what of his heirs—as Louis XI sadly noted?

Over the course of the nineteenth and twentieth centuries to date, the affairs of world trade and investment have been predominantly under the control of a concert of rentier-financier private powers centered in the City of London. This has been a power for evil. To the extent that the private central banking of particular nations may embody patriotic impulses contrary to institutions centered in London, London's control (together with the forces of the Bank for International Settlements, based in Basel, Switzerland) over the International Monetary Fund, the World Bank, and the central banking of the United States of America, subordinates the patriotic impulses of the private central banking of particular nations.

Generally speaking, with our eyes turned for a moment to the private central banking of the last years of the American Revolution, commendable private ventures in central banking have the character of a private initiative on behalf of the national interest. Private institutions are then creating an instrument for the government, an instrument which the government must gratefully purchase from those patriots, and so make its own institution. It would be the same if a concert of private bankers acted to initiate new international credit institutions, as this reporter proposed as an emergency measure during 1977. The national banks of the nations must then gratefully acquire such a new institution from the hands of those who have established this useful institution.

The principles of national banking are most emphatically issues of life or death for developing nations today.

Established industrialized nations have achieved some degree of balance, of proportionality, among the various industries and other categories of production, distribution, and consumption. For this reason, the degree of marginal changes in economic institutions and their proportions which is required for the national interest, is relatively small by comparison with the requirements for developing nations. Thus, where an industrialized nation's economy can survive a wicked bias in credit institutions' policies over such periods as the term of office of a U.S. President, or even longer, the same degree of error in the central banking of a developing nation produces disastrous conditions quite rapidly.

For reasons which we have already indicated, in part, in the course of this report, a developing nation must effect rapid and radical shifts in the proportions of agricultural, capital-goods-producing, and consumer-goods-producing sectors. While placing the priority on the interrelationship among agricultural, infrastructural, and capital-goods-producing development, it must carefully manage an acceptable, if relatively low rate of growth in manufactured consumer goods. This shift in proportions requires concentration of growth of technological-progressive capital-intensity as the means of effecting those shifts. It must accomplish

these changes with a meagre minimum of national surplus and imported long-term credit available. Slight amounts of absolute error in directing the flows of the relatively tiny per capita social surplus, can have almost irreversible, and disastrous consequences over a short period of time.

This requires extremely tight direction of the creation and application of credit resources and growth of sectoral costs and incomes. This tight direction of the economy must have political support of the majority of the population, a support which must be cultivated through institutions cooperating with the government and leading political parties.

But wait! The mere mention of intent to establish national banking of this sort, by sovereign governments, provokes from a certain address in Basel, Switzerland, such screeching, clawing, and kicking, that one might imagine he had stepped on the tail of an unusually bad-tempered cat. You were less unpopular in those offices, had you robbed a leading Swiss bank at gunpoint, or were suspected of repealing the law of gravity.

The British press—particularly, the *London Times*, the *Economist*, the *Financial Times*, the *Observer*, the *Telegraph*, as well as the Hong Kong *Far East Economic Review*—react with libels against the government suspected of such undertakings, and hint strongly at imminent riots and political coups in that nation, or an imminent military conflict with some neighboring state. Such British sentiments are echoed, usually within forty-eight hours' lapse of time, by the *New York Times*, the *Washington Post*, the *Los Angeles Times*, and, with perhaps slight delay, weekly news magazines such as *Newsweek*, *Business Week*, and in a column in the *Wall Street Journal*.

Such protests are the characteristic reactions of the organs of the rentier-financier, oligarchical networks, the same networks which house the forces of the old colonialists, the postwar period's neocolonialists, and the past fifteen years' authorship of the drive toward global genocide.

There are massive accumulations of primary sources for discovering the conscious outlook of these circles. One such set of sources is a set of books composed by the New York Council on Foreign Relations over the period 1975 to 1976. These books are the policy-outlines developed for, and followed by David Rockefeller's creation, the Trilateral Commission puppet-administration of President Jimmy Carter. The books, collectively entitled the "1980s Project," were published by McGraw-Hill, the publisher of *Business Week*, with aid of a subsidy from the same Lilly Endowment which provided, over a period of years, the principal funding for the Institute for Policy Studies' special project headed by ex-CIA employee Philip Agee. (This is relevant, since Lilly usually funds so-called right-wing projects, and since it was under British intelligence auspices that Agee began, and secured continuing protection

for, his present career as a putative sympathizer of the Soviet KGB and Cuban G-2.)

We wish to focus immediately, here, on one of those books—which we reviewed from a strategic vantage in a book published in 1980, *Will the Soviets Rule During the 1980s?* (The theme is an elaboration of the point we summarized at the conclusion of the preceding section of this present report.)

The authors of that book focus their adversary attention against a phenomenon they describe as “neomercantilism.” They correctly identify this phenomenon with the political economy of Alexander Hamilton and Friedrich List (the “American System”). They outline their fear, that “neomercantilist” impulses within some industrialized nations might converge upon both traditional Marxian industrialization impulses of the Soviet Union (the state sector, principally) and the aspirations for technology of developing nations. This, they insist, must be crushed before such convergences toward cooperation might crystallize into the form of powerful, institutionalized impulses.

That argument is not exceptional within the totality of the volumes of this collection. This is the book from the collection which elaborates most extensively the doctrine of “controlled disintegration” of the world economy, as well as the economies of nations including the United States. That, as we have noted earlier, is the avowed policy and current practice of U.S. Federal Reserve Chairman Paul A. Volcker. It is the policy under which Prime Minister James Callaghan and Prime Minister Margaret Thatcher conducted the successive steps turning Britain into a “formerly industrialized nation.” It is key to the international and domestic economic and monetary policies of the Carter administration, and to the present policies of Kissinger and Carter holdovers within the present administration. In brief, this book outlines the economic doctrine which coheres with all of the other features of the CFR’s proposed policies.

In such matters, it is indispensable to dig behind the representation of issues encountered in news media, in parliamentary charades, or in diplomatic charades of North-South and other negotiations. Very few leading parliamentarians in the world are directly instructed in the real issues. They are assigned, witting or not, a part of the function of misleading the public, the parties. The formulation of key issues from these and news-media sources is principally rhetoric, and is rhetoric intended to mislead. The art of government, from the vantage point of the British inner circles (for example), is the method of mass-manipulation, of mass-deception. As the duped masses, including most politicians, are led, step by step, down the pathway toward the action which the manipulators desire, the public, the parties, and so forth are supplied a motive for action which does not correspond to the ultimate

consequences of the pattern of successive actions implemented with aid of such ruses.

There are two categories of evidence which must be examined to isolate the actual effect and intent of the policies afoot. First, one must assess the actual consequences of not only individual actions, but of patterns of such actions. We must overlook the stated purposes of the actions, and focus instead on the actual consequences of cumulative patterns of actions. This inquiry discovers the consequences of those patterns of actions, but does not, admittedly, suffice to prove that the authors of those policies embody the intent *such* consequences indicate. Second, therefore, we must examine the discussion-papers composed and issued to instruct the leading instruments of policies in what those instruments are deemed to "need to know" to manipulate press, politicians, and so forth. This examination of such papers (and conferences of the second and third levels of ruling financial and policy-shaping circles), should be supplemented by direct access to the personal thinking of a selection of leading behind-the-scenes personalities. By comparing the expressions of intent, and of knowledge of connected cause and effect, from such sources with the actual implications of patterns of policy-actions, the matter of intent can be rigorously resolved.

The book in question, from the cited CFR collection, is a statement whose candor and wittingness lies midway between the actual knowledge and intent of innermost circles and the politician-dupes who are manipulated by such policies. The book does not reveal all, or represent real candor; it is the shadow of true candor, not the actual substance. Yet, on some crucial points, including the reference to "neomercantilism," the inner thinking of the ruling rentier-financier circles leaks out directly into print.

If the policies of credit, banking, and technological progress elaborated by U.S. Treasury Secretary Alexander Hamilton were to be revived in the policy and institutionalized practice of nations such as the United States, the position of the rentier-financier network would revert to a position little better than that network faced during the period of Hanotaux's influence. As the late President J. Tito of Yugoslavia argued at the Havana conference of the nonaligned nations, to touch the issues of the present international monetary order is to touch the key issue of world war. Contrary to Tito's plea for submissiveness toward London and Venice, the choice is between global genocide and risk of war. Happily, if there is wisdom among key nations on both sides of the strategic alliances, as well as from among developing nations, the danger of war can be avoided even under conditions of direct confrontation with the rentier-financier networks' control of the IMF, World Bank, et al. To submit to the genocidal policies inherent in present ruling monetary institutions is to submit to global genocide, and to embark on

a risk of almost certain war as well. *We have no choice but to challenge and defeat those monetary powers.*

Therefore, we must proceed with what the British hate as "neomercantilist" policies of credit, banking, and technological progress.

By national banking we point to the models of reference provided by the Bank of the United States initiated by Hamilton, and the Second United States Bank of the period of U.S. Presidents Monroe and John Quincy Adams. We also refer to the credit and banking policies employed by President Abraham Lincoln which effected a successful industrial revolution in the United States even under conditions of war. We refer not so much to the detailed features of those examples of national banking. We identify those cases as a means of referring to the durable principles which Hamilton and others addressed in initiating such practices.

Some of the Rudiments of National Banking

Credit issued by banks takes two proper forms. One of these forms is the lending of *savings* deposited with banks. The other of the two forms is the case in which the credit extended does not originate in deposit of savings with banks, but is *created credit*. In the latter case, *confidence* in the credit-worthiness of a government or private financial institution enables that institution to issue currency or other negotiable instruments without direct backing for that specific issuance of such forms of money.

It is the relationship between these two forms of lending which is the crucial issue of banking in general, and national banking in particular.

The novice might ask: Why is it necessary to manufacture any part of the credit used by an economy? Were it not better to limit all lending to loan of deposited savings? The question suffices to prove that the questioner has overlooked the most essential feature of an economic process.

If the sum of goods output of an economy at any point is a total of the accrued values for C , V , d , and S' , it is only the sum of the accruals C , V , and d which correspond to money placed into circulation as payment for costs of production of total C , V , d , and S' . This is a well-known problem in the economics literature, sometimes imprudently named the "buy-back problem."

The margin of goods corresponding to S' is a mixture of capital goods and consumer goods. In other words, these are potentially invested capital stocks of expanded production, plus real wages of those employed in that expanded production. The objective is to put those capital stocks and wages-goods to work, to use them up in the production of a larger amount of new wealth than that real magnitude of S' represents.

Since the employment of S' in that productive manner will increase total wealth of society by an amount significantly in excess of S' , society can well afford to loan a capitalist the amount needed to purchase that amount of S' for productive investment.

However, since—in terms of accruals—the money in circulation, including additional savings, is determined by the values for only the sum of V , C , and d , not including S' , the amount of money added to circulation plus deposits of savings is axiomatically insufficient to effect the sale for investment of S' .

Therefore, *we must create more money*. However, we must limit the creation of additional money to its use as investment capital for investment of S' .

The considerations governing the lending of such additional supplies of currency notes are principally as follows.

On condition that he is a competent capitalist, and competent in respect of modern technologies for the branch of production in which he is engaged, that capitalist will produce more wealth than he consumes in employing capital and consumer goods for production. He will invest, on the average, in terms of capital-intensities equal to or better than the prevailing averages for $C/(C+V)$ in that branch of production. He will achieve, on the average, a productivity equal to or better than the average value of $S/(C+V)$ for that branch of production. On condition that he keeps his expense ratio, $d/(C+V)$, within bounds, he will have a rate of profit, $S'/(C+V)$, which is equal to or better than the average for that branch of production.

The banker involved, satisfied on those points, must also assure himself that the borrower will not abscond with the wealth he earns, not waste that wealth on maintaining a network of mistresses, and so forth and so on. Both the capability of performance and personal character of the borrower must be taken into account.

Under such conditions, the capitalist borrower will amortize the incurred debt out of the contribution to national S' his investment generates during the following period.

Therefore, the advancement of created money to such purposes is sound investment. The debt is secured by the assets purchased from the stock of S' . The debt as a financial instrument is validated by the reality of the prospects of its amortization on the average. Thus, the real backing for the currency notes created to facilitate that loan is the expanded wealth being created by such a secured form of investment.

The currency notes created enter circulation through the capitalist's purchase of capital stocks (out of the margin of S'), and through purchases of real-wage goods by the employees engaged in producing with aid of those capital stocks. Under these conditions, the increase of

currency notes in circulation matches the increase in goods placed into circulation.

There are important problems implicitly associated with such issuance of newly created volumes of currency notes. Those problems are not situated in the aspect of the matter we have just outlined. We shall come to those implicit problems in due course.

The national bank enables the economy's growth by creating new issues of currency notes. It is useful, but not indispensable that that national bank know what the magnitude of S' is during that interval. The adherence to the proper methods and procedures of circulation of such new issues provides a built-in adjustment, to prevent insufficient or excessive supplies of such notes from actually entering circulation.

The national bank must not *on its own account* issue such notes in any form but as purchase of capital for productive investments. In other words, these notes must be employed only to effect the productive investment of real goods corresponding to S' . The exemplary way in which this is accomplished is the national bank's participation in part of the amounts lent by local private banking institutions. For the moment, we overlook the similar, but different procedures employed for investments in projects of the state.

The national bank takes up a portion of certain categories of loan agreements between private banks and their clients: a percentage of the total amount of lending. This is accomplished by lending to the private banker either currency notes or a claim against such notes equal to the portion of that loan agreement which the national bank is funding. This currency, or claim against currency (a cashier's check of the national bank, for example), is a loan by the national bank to the private bank. This loan is made at the lowest interest rate among banks. The private banker adds his service charge to that national-bank interest charge, in advancing a corresponding amount of principal to the borrower.

The national bank cannot engage itself in poking into the affairs of each and every small or medium-sized capitalist taking productive investment loans from private banks. Rather, the national bank protects itself against conspiracies to commit fraud between borrowers and private bankers by cruel laws for such offenses, and by auditing procedures. Provided that honesty is maintained with aid of such devices, the problem of national-bank loan administration is reduced to economic safety measures.

The total loan issued to the capitalist borrower for productive investments has three elements, apart from financial charges. The first element is equity advanced for the purchase of capital by the borrower. This advance of equity by the borrower limits the liability of the private banker to a portion of the total purchase of capital, the capital which is

the principal form of physical security for the loan. The second element is the deposits loaned by the private banker. The borrower and the private banker thus take principal risk and responsibility. The third element is the portion of the loan advanced as a national bank loan to the private banker.

That policy is the broad foundation of loan administration by the national bank.

The categories of loans for which the national bank participates in loans to the private sector are properly limited. These limitations include, first, the categories of lending in which the national bank will undertake any degree of participation, and, second, the establishment of policies which define the total amount and percentage of national bank participation in each designated category of lending.

Excepting the case of state projects, which we have yet to consider here, national bank lending should be restricted to loan participation in *productive investments which increase national productivity* per capita in goods production or in transportation. These include agriculture (narrowly defined), fishing, forestry, mining, capital-goods manufacturing, consumer-goods manufacturing, heavy-engineering construction, other construction, research and development in productive technologies, and transportation.

The government and national bank should estimate the lendable credit available from all sources, including an estimate of the combination of S' and imported credit available. The object of lending policy is to apportion the direct and catalytic effects of issuance of credit by the national bank to effect desired shifts in (a) proportions of the economic categories of national output, (b) capital-intensity of modes of production used, (c) increases in the ratio $S'/(C+V)$ for the national economy as a whole, while extending the scale of employment.

These determinations may be described usefully as the *lending budget* of the national bank.

Such budgetary projections should be publicized for the information of citizens, especially that of productive entities and private banks. This budget not only guides the officials of the loan-administration functions of the national bank, in processing loan-participation applications from private bankers and others. It is a guide to the policy planning of both businessmen and bankers, as well as a necessary tool of the national government's own economic management functions.

Such annual budgetary projections should be viewed as adjustments of longer-term budgets, for periods in the order of seven to ten years. Since debt incurred for productive projects is the principal financial feature of economic development, including foreign debt, a state must know whence come the funds to pay the debt service. This foreknowledge must span a period equivalent to approximately the half-life of average

investments in capital stocks and related investments. Hence, the projection of a range of seven to ten years.

This is not quite the same matter as the economic development budgets of the national government. These development budgets should span a period of not less than a generation—since it is the development of the productive powers of labor of the population, especially in terms of the development of a new generation added to the national labor-force, which is the proper foundation of national policy. What the citizens of a nation require is a conception of how they shall govern their affairs to achieve results in terms of the rise to maturity—and need for employment and a certain standard of life—of the children those citizens are presently rearing.

Whereas the national economic development budget should be outlined in terms of a fixed-calendar-interval for the span of a generation, the budgetary projections of the national bank should be shifted each year to span a forward period of that year's next seven to ten years ahead. This is analogous to projecting cash flow in terms of capital factors of cash flow for a seven to ten year forward period. This variety of cash-flow projection is the financial management, and debt-management administrative tool of the national bank.

If we compare the present condition of most developing nations today to the case of individual firms, we are rightly inclined to view most of these nations as analogous to bankrupt agroindustrial corporations. Since these are nations of human beings, not merely "corporations," we cannot liquidate the people and assets of a nation as we might a corporation in a wretched financial condition. Furthermore, since these are nations, with people capable of developing relatively advanced productive powers, we can rebuild those "corporations" into viable, prosperous entities, provided we employ a proper approach, and are willing to undertake "financial reorganization" of such "corporations" over the span of time required to develop them to such conditions of prosperity.

A "corporation" which is prosperous may indulge itself in relatively slovenly economic management. "Sophisticated" economic-management methods and procedures are always advisable, but prosperous corporations often indulge themselves by avoiding such tools, and yet survive. Once a "corporation" comes into a state of difficulties, into conditions under which its life or death requires the most rigorous administration of limited resources for growth out of bankrupt conditions, the resort to "sophisticated" methods and practices of management can no longer be avoided—if the entity is to succeed.

Every well-managed industrial corporation will maintain something like a seven to ten year forward cash-flow projection in terms of development of capital factors and debt management. It is the same

with a well-managed developing nation seeking to work its way out of the heritage of bankruptcy *imposed by successive eras of colonialism, neocolonialism, and current genocidal policies of leading world monetary institutions.*

It is no good approaching the economically bankrupt, formerly industrialized nation of Britain with a bill of accumulated damages for its wicked deeds over two centuries to date. It is not so much a matter of who caused the bankrupt conditions. It is a practical matter, of how we extricate ourselves from the conditions created over, cumulatively, two centuries, and that often beginning with conditions which were already hideous enough before the colonialists interjected themselves.

It should be stressed that developing nations must reject and abandon the currently popular methods of national-income accounting. We refer to Gross Domestic Product and similar measures of national output. The reasons for doing so we elaborated earlier, and will illustrate the destructive consequences of such national-income accounting methods in a relevant location in this present section.

The methods of national-income accounting to be employed for all purposes, including the seven to ten year projections of cash flow in terms of capital factors and debt management, should be those methods outlined in an earlier section of this report. We measure the output of the economy in terms of the stated analysis of C , V , d , and S' , on the foundation of population-household census-matters, taking into account the whole population as defined in terms of the population of households. We measure the economic growth—and real value of output of an economy in terms of first approximation by the social ratios $C/(C+V)$, $S/(C+V)$, and $S'/(C+V)$. We do not consider any income or employment under category d as an addition to national output *in and of itself*. Rather, we estimate the necessary value of the ratio $d/(C+V)$, and analyze the composition of d by categories of service and administration activities. We know that the full measure of the current contribution of d to national output is embodied in the ratio $S/(C+V)$ —effective national productivity.

The analysis of the process of economic development in those, real terms is readily converted into a statement of corresponding cash-flow projections. We associate the flows of circulation of accruals with those real terms; in turn, we associate patterns of money circulation with the payment of those accruals. We do this, broadly, for the indicated categories of the economy. We extend that analysis, providing a much more detailed schema, in terms of the subcategories of the economy.

This analysis should be subdivided, to consider not only categories of productive activity, but regional distribution of such activities throughout the country, and corresponding matters of the interrelationship of

categories of production and consumption within regions and urban-orbited localities of the national economy.

By such analysis, we are tracing the *sources and applications of funds* through the process of economic development, both for the immediate year, and that within a seven to ten year range of forward projections each year. It is that *mediated reality* of cash-flow projections which is the crucial methodological feature to be emphasized.

Foreign Credits

Thus far, in this section of our report, we have emphasized two crucial, interrelated points. We have pointed out the simple fact that development occurs principally through the investment of a social surplus (S') which consists of a quantity of goods produced and available within the national economy. This quantity of produced goods, a margin of social surplus, consists of both capital goods and consumer goods. It is prudent to prefer the term "real-wage goods" to the usual "consumer goods." We have also stressed the interrelated point, that this surplus does not consist of a quantity of money profits, but of physical goods.

From this point of reference, we now outline the most relevant considerations pertaining to import of foreign capital.

How, then, shall we develop an economy in which the ratio $S'/(C+V)$ is either zero or negative?

It is important that this ratio be determined properly, by taking into account the households of the population as a whole. We include the proper costs for support of households which are either households of unemployed members of the labor-force, or which exist outside the money economy, under social-economy category *d*. Calculations based on the "value-added" statistics from money economy alone are intrinsically incompetent, and intolerably incompetent even as approximations for the case of developing nations.

In such a case, if $S'/(C+V)$ properly calculated is zero or negative, there exists no social surplus within that national economy. Therefore, issuance of currency notes against S' is not a method available to us for this case.

In such a case, we must borrow *physical capital* (technology for productive investments) from nations which do have a *disposable surplus capacity* in national production. We must import capital stocks embodying modern technology from nations which, for one reason or another, find it advantageous to export those capital goods, rather than to consume them at home.

We accomplish such transactions by borrowing either the currency of

such an exporting nation, or a claim against payments in that currency. We use that claim against the currency of that nation to pay exporters of capital goods from that nation to our own. These goods become the margin of added capital stocks we invest in modern modes of production goods, to replace the volume of goods (S') which we would prefer to have available from our own national economy's output. (Or to be able to purchase with funds earned by export of part of our nation's surplus margin of output.)

The means to which we resort are one or a combination of the following:

1. Foreign nations may provide grants.
These grants take the form of a credit placed to the account of our nation in either some financial institution of the exporting nation, or the national treasury of that nation. We may *not* withdraw currency against this credit, but the approved invoices we incur from exporting firms of that nation will be honored for payment by the relevant financial institution or national treasury.
2. Our government may raise funds abroad by selling or leasing national assets (such as mineral exploitation rights).
3. The government, acting through the national bank as its financial representative, may sell long-term bonds.
4. Private citizens or entities of our nation may sell, lease, or mortgage assets which they own, to secure capital for investment in national development.

They may do so to obtain funds for private investment in developing agriculture or industries in the nation, or to purchase national bonds, thus placing such foreign-currency funds at the disposal of government and national bank.

5. Foreign financial institutions may place time-deposits with the national bank, or with private banks of the nation, through the mediation of the national bank.
6. Finally, and least desirable, is an emphasis on foreign-currency earnings obtained from promoting "luxury" forms of tourism.

Since the last of these six items is a distinct matter of policy, we dispense with it through a brief outline of the matter, and then proceed freely to focus on the policies relevant to foreign-currency claims obtained by some combination of the remaining five alternatives.

The danger of promoting "luxury" forms of tourism in developing nations is that the diversion of assets for developing the infrastructure of luxury tourism is precisely that, a diversion of resources which are

already scarce enough. The problem is compounded by the effects of such luxury tourism on the proportions of economic activities and employment in the national economy. The enlargement of luxury-tourism components of commercial development tends to spill over significantly into the internal economy, in terms of buying-habits shifts and other problems.

What a developing nation ought to offer to foreign visitors is what the nation is already providing for its own needs. A certain number of good hotels are needed for the internal commercial and industrial life of the nation. An increased margin of tourist revenue for support of investments in such already needed hotels is not to be despised. The nation requires a good rail transport system for passengers as well as freight. We should desire that tourists also purchase use of such facilities. Our public eating places should offer a good representation of an improving national diet for visitors as well as, primarily, for our own citizens. Foreign currency coming into the nation, by way of tourists, will contribute marginally to developing such public eating places. In summary, the nation should offer visitors a good representation of what the nation presently has to offer to its own citizens, an offering which should be limited in terms of categories of goods and services which the nation requires presently in terms of priorities of its own internal development.

In general, all foreign currencies and claims against foreign currencies brought into the nation, except for small amounts held personally in the purses of individuals, must be deposited with the foreign-currency accounts of the national bank. All claims against and holdings of foreign currencies outside the nation, by either citizens or entities of the nation, are implicitly at the disposal of the national bank's foreign-currency accounts, and are denominated for the possession of the owner in the equivalent amount of national currency. That is to emphasize that the government and national bank have the sovereign right to regulate such overseas holdings of foreign currency and currency claims, an implicit right which is exercised as the best interests of the nation prescribe under various conditions.

To the same and complementary effects, the licensing of purchase or sale of goods or services, from or to a foreign nation is also an implicit power of the government, for which the national bank acts as the government's financial representative.

It is in the vital interest of the government and nation to promote world trade, and to also promote private discretion in *useful forms of trade*. However, it is directly contrary to the most vital interests of the nation that individual citizens, or public or private entities of the nation, incur debts against the national currency or foreign-currency obligations which impair the credit of the nation.

In practice, the administration of this matter is facilitated by budgeting

imports and exports by categories, as part of the annual and longer-term cash-flow budgeting of the national bank. This provides nationals with confidence and encouragement in freely pursuing trade in those categories of transactions which the budget favors, while forewarning the national that the government may be less willing to grant the right to incur foreign obligations for other reasons, or to spend national foreign-currency assets for what the government regards as frivolous or lower-priority purposes.

In these and related matters, the national bank functions as a national export-import bank, as well as the government's principal financial representative in foreign affairs.

Generally speaking, a developing nation must restrict the use of all but the smallest portion of its foreign-currency assets to use as capital for import of technology of productive activities.

To facilitate productive investment of imported foreign capital stocks in the private sector, the national bank employs the same methods and procedures we outlined earlier. Claims denominated in national currency notes are loaned, *in part* by cashier's check of the national bank against a loan agreement with a local private bank. These amounts are national-bank participation in the loan agreement between the local private bank and the borrowing farmer or capitalist in the same fashion we outlined earlier.

Example: The firm of an exporting nation has a sales office within the capital city of our nation. This office incurs expenses and costs of its operations in terms of the local national currency. This office may be also a service office, through which installation, maintenance and related technical services are provided to our nationals employing capital goods of that and other foreign firms. A capitalist firm, a national of our nation, imports technology for its own productive use from the parent firm in the exporting nation.

Our problem in this case, as distinct from the earlier cases, is that we do not wish to put into circulation an additional amount of currency notes, or claims against such national currency notes, in excess of the portion of the total loan used for purchase of domestic production. Therefore, except for the amount of the purchase of the imported technology creditable to the economic activities of the local office of that firm, and implicitly spent by that firm within our national economy, no part of the CIF value of the imported technology must be cause for increased distribution of currency notes by action of the national bank.

Example: the government or a private national of our nation leases a tract of land to a foreign citizen resident in our nation. This foreign citizen constructs either a personal residence or business structure on this tract of land. In constructing this building, the purchaser of the leased land imports certain materials, furnishings, and other items.

Insofar as this person uses foreign currency from abroad, and not foreign-currency claims purchased with our national currency, the government and national bank would probably (and rightly) grant that person relatively unlimited import rights, even outside the standards of the budget. These imports do not affect the credit-worthiness of the national bank, as would purchases of foreign currencies with our national currency for the same purpose. Furthermore, such residents of our nation, performing useful categories of activities in the nation, would receive a limited degree of relatively favorable treatment in respect of amount of personal-consumption imports annually—a policy dictated by our desire to attract useful technologists for our national benefit.

Except for a determination that the foreign citizen resident in the nation performed a function in the national interest, the construction of the premises using local materials and labor would not, in itself, qualify for national-bank participation in the construction loan or permanent mortgage on those premises. It is not that we do not wish to be hospitable; we cannot afford it, except as concessions to attract needed technologists to assist our national development. However, we would permit the person purchasing the lease on that tract of land to borrow an equivalent amount of the national currency (equal to the foreign-currency portion of the purchase of the lease) for construction purposes. We would do so *up to the limit of our policy for encouraging such residencies.*

In all matters pertaining to foreign currencies and claims against foreign currencies, including their possession by the government, the national bank, or private persons and entities of the nation, the following major principles apply.

As a matter of law, the national bank has the *right* to direct that no foreign currencies or claims against such currencies shall enter the national life except as deposits made to the foreign-currency accounts of the national bank. The national bank may, however, extend *privileges* for possession of such foreign monetary assets in foreign monetary denominations to private persons or private entities of the nation insofar that this aggregates to no potential danger to the credit-worthiness of the nation and its own national currency notes.

Similarly, conversely, as already emphasized, no obligation for payment of foreign currency or foreign-currency claims shall be incurred by persons or private entities of the nation except under the regulation of the national bank.

Obviously, privileges for holding relatively small amounts of foreign currencies and claims by private citizens, and therefore the citizen's discretion in spending those sums, are appropriate to most cases.

Obviously, we desire that our citizens should seek to acquire foreign-currency earnings, and to secure a personal benefit from such acquisi-

tions. On condition that the national interest is served in this matter, the national bank, under the direction of the government, must develop methods and procedures to facilitate discretionary action by private persons and entities in these matters with a relative minimum of administrative intervention.

The immediate issues, as stressed earlier, are that a nation which has a bare minimum of capital stocks available from its own production, and a minimum of foreign-currency assets held aggregately by public and private entities, must manage its incurrence of new additions to debts denominated in foreign currencies, and must require that the largest portion of such holdings and acquisitions of foreign currencies and credits be dedicated to increasing the import of needed capital stocks.

The budgeting control over foreign currency and related matters is not a repressive action against the private persons and entities of the nations. It is the national bank's function of implementing national development policies, of coordinating the activities of private persons and entities (as well as government) to bring the accumulation of individual private transactions into agreement with national policy. No private citizen can know individually whether his or her individual discretionary action causes the total of income and expenditure for a certain category of national activity to exceed or fail to achieve the projected budgetary goal for the sum of actions by the citizens as a whole. The national bank is an instrument of *self-government* of monetary affairs by all of the citizens, an institution through which all of the citizens accomplish in concert what no portion of the citizenry could competently accomplish independently.

The *appearance of a repressive quality* for such lawful rights and action of the national bank may arise, however, either because of ignorance of the citizenry, by the spreading of seditious disinformation by enemies of the national welfare—such as British intelligence and its accomplices—or by a failure of the government and national bank to disseminate adequate information to the citizenry concerning the purposes and specific conditions involved in management of national monetary affairs.

The working-point here is illustrated clearly enough from experience. The citizens grumble or achieve more excited states of unhappiness because of painful rates of inflation of the national currency, or because of repressive measures of austerity consequent upon foreign-debt crises. The citizens are also hostile to the persistence of poverty, and to what they perceive to be inadequate rates of advancement upward from a condition of impoverishment. In such matters, citizens of nations have been known to demand that "the government do something" to alleviate such problems. Governments have been ousted in elections or even by

unlawful means, in circumstances in which such issues provided the climate of discontent favoring these developments.

If it is the will of all sane citizens not to suffer such inflation, debt-crisis austerity, and lack of relief of impoverishment, and if it is the uniquely appropriate function of a national bank to provide indispensable elements of relief from such conditions, then the people will not consider the actions of the national bank "repressive" if the people understand the connection between the benefit and the institution.

The principles we have reviewed so far pertain to the external side of the monetary functions of the national bank. We consider next, the management of the connection between foreign-currency acquisitions (or disbursements) and the management of the level of the domestic money supply. In this connection, it is useful to deploy a popular slogan as a rubric for our proper policy: on the domestic side of this matter of foreign-currency management, the national bank's proper policy can be termed a "hard-money policy."

The foremost of the problems to be considered is the dangers of using the acquisition of an amount of borrowed or earned foreign-currency claims as assets against which to increase the level of national currency notes in circulation. (Under *circulation*, we include deposits in private banks.) If the level of currency increases more rapidly than the availability of produced goods, one of two problems must occur. In the first option: either the money is spent in such a manner as to either increase the prices of goods (inflation), or money flows to purchase of labor-intensive services. That latter increases d , and thus $d/C+V$. This reduces $S'/(C+V)$, and thus reduces the rate of growth, leading toward general inflation on this account. In the second option: we are confronted with a situation of the sort which plagued Poland. Since the amount and prices of goods were limited, the income above prices paid for goods became unusable money.

There is, admittedly, a considerable amount of monetary theory afoot internationally, in banking and other parts of the monetary profession and government circles, as well as in university textbooks and classrooms. Usually, the emphasis is placed on a notion named "velocity." Although it is possible to measure this much-admired phenomenon by various mathematical tricks, the attempt to base monetary policy on such considerations is not only superstition, but dangerous to the economy itself.

Like "bad breath," monetary "velocity" exists, but one does not base a nation's monetary policy properly on either phenomenon, simply because one can demonstrate that the phenomenon exists. It is like counting baboon droppings, observing that these increase in proportion to baboon populations, and then constructing a proposal to reduce the

population of baboons by action taken directly against the elimination of the correlated droppings.

The point of the matter is to reject the nonsense policy, of forcing the real economy to conform to the perceived requirements of some monetary theory, and, instead, to force monetary practices to conform to the requirements for the development of the real economy.

The British and their admirers will object hysterically at this point. Since the varieties of monetarist superstition we discard are the principal stock-in-trade of most nominally accredited economic professionals of the world currently, we are obliged to attack the British colonialists' impassioned objections at this point of our elaboration.

The Secrets of Monetarist Theories

At the beginning of this report, we identified the distinguishing axiomatic features of the British varieties of political economy. We distinguished, in earlier portions of this report, between two general categories of British political economy, one outwardly rationalistic in form, the second avowedly, axiomatically irrational. The first is typified by Adam Smith and David Ricardo. The second by John Stuart Mill and his successors. All of the popular dogmas of contemporary political-economy classrooms in Britain, the United States, and Western Europe are directly derivatives of this second, irrationalist phase introduced formally by Mill, Jevons, and Marshall.

We have emphasized, Mill and Jevons emphatically and correctly insisted that the entirety of their political-economic dogma was based on the "hedonistic calculus" of Jeremy Bentham. Whereas Bentham had insisted that the only possible knowledge in society pertained to the psychological perception of individual pleasure and pain in isolatable transactions among individuals, Mill et al. insisted that the only empirical phenomenon reflecting the mutual accommodations of pains and pleasures in society generally was the money price associated with purchases and sales. The money price of a transaction reflected "utility." In the isolated transaction, the price might deviate greatly from the price at which the pain and pleasure of the participants were balanced with mathematical perfection. However, in the course of a great many such transactions in society generally, and over an adequate period of time, the movements of prices would adjust in directions converging on the mathematically perfect price.

To this, Mill et al. added one feature. They noted that the purchase of two things of the exact same character did not necessarily afford twice as much pleasure or pain as the purchase of one. In a related manner, they noted that the man whose mouth is stuffed with a large piece of

fruit is denying himself a mouthful of pork at that same particular instant. So, they perceived the assortment of purchases to be a variable feature of experienced pleasure and pain, connected to the variable quantity of the purchase of any one kind of thing at any one time.

Although these purported savants have imagined themselves to have discovered several subordinate qualities within *utility* generally (*utilities*), the enlargement of the mass of marginal-utilitarian intellectual rubbish in that fashion only enables the hedonistic fantasy to occupy more fully, more exclusively the consciousness of the dupe.

As we noted earlier, the correlated axiomatic feature of such monetarist constructions is the hysterical denial of any determination of economic value, but "values" subsumed as determinations according to the hedonistic appreciation of the significance of marginal shifts in the money price of purchases and sales.

In consequence of such complementary axiomatic features of the political-economic irrationalism of Mill et al., every feature of British and kindred political economy is consistent with those axioms. The term to be borrowed appropriately from modern bad logicians to describe such connections is the so-called hereditary principle. The underlying characteristic of every feature of British and kindred political economy is the elaboration of the axiomatic hedonistic principle we have just outlined.

Specifically, specific monetarist doctrines such as the indicated dogmas concerning "velocity," arise by way of a method sometimes described as creating a theoretical construct "to save the appearances of a doctrine." That is, if a certain doctrine fails to explain consistently every important phenomenon which that dogma might be held responsible for explaining by popular opinion, the defender of the dogma concocts a plausible argument, attempting thus to console persons who may have objected to such an omission. Such plausible rhetoric will not endure in popularity for long unless two other conditions are fulfilled. First, the plausible rhetoric employed must be *formally consistent* (logically) with the axiomatic features of the dogma being defended. Second, there must be *some specific phenomenon which appears to be explained by the added bit of plausible rhetoric*.

To account for monetary circulation in a real economy, we must in fact examine the structure of flows of real values through the economy—in terms of $C/(C+V)$, $d/(C+V)$, $S/(C+V)$, and the derived $S'/(C+V)$. Those social ratios determine the proportions of flow among C , V , d , and S' . The flows from capital accounts to wages, wages to capital accounts, and savings into capital, are the result.

In contrast to this reality, consider the problem of the irrationalist marginal-utility sort of political economist. If he is to be considered credible by governments, bankers, and so forth, he cannot fail to offer

some explanation for the monetary side of matters such as volume of money circulation for purchases, rates of conversion of money-savings into money-capital, and rates of inflation and deflation as monetary phenomena, and similar matters. Yet, his entire dogma depends upon denying any determination of value in an economy but marginal utilities, and denying any functional processes in the economy but those consistent with Bentham's hedonistic calculus.

Hence, he is obliged to seize upon an effect of the real considerations (which he denies to exist), the velocity of circulation of money supply.

It is not such *constructs* by themselves which cause modern monetary systems to behave badly. The evil practices of Byzantine Venice and the British East India Company's banking institutions existed long, long before John Stuart Mill, or even Francis Bacon, the putative author of British empiricism. Such practices existed within, and destroyed from within, ancient Babylon, the Baghdad Caliphate, and Europe of the late thirteenth and fourteenth centuries' banking houses of the Bardi, Peruzzi, et al. The dogmas of the marginal-utilitarians merely coincide as explanations with the practices of financial systems based on oligarchical forms of rentier-financier principles. The chief practical significance of these modern constructs is that to the extent such fraudulent explanations are influential, belief in such hoaxes blinds governments and citizenries to the wickedness of certain crucial features of rentier-financier practices.

This agreement between the modern continuation of ancient tax farmers' usury and the irrationalist philosophy of Mill et al. is no mere coincidence; it is not an accidental convergence on propensity to mate between the two species, as might be determined by some Darwinian sort of "natural selection."

The hedonistic principle espoused by Bentham, and after him by his followers Mill, Ruskin, Jevons, Marshall, et al., is elaborated in the *Nicomachean Ethics* of Aristotle. Aristotle, in turn, did not discover the elaboration of Bentham's borrowed hedonistic principle. Aristotle was an agent of the Cult of Apollo at Delphi. *Apollo* is the Hellenic name for the Middle Eastern pagan deity *Marduk*, called *Lucifer* in Christian theology.

These synthetic pagan religions were concocted for the regions abutting the Mediterranean of that whole general period by a priesthood typified by the name of "magicians," passed down from the contemporaries of ancient Greek civilization into the present time. These magicians and the oligarchical caste practicing ancient, tax-farming forms of rentier-financial practices, were one and the same ruling caste. The connection of Aristotle to more ancient forms of usurious practices is most immediately identified not only through his adherence to the Cult of Apollo. Like the Cult of Apollo itself, Aristotle was an agent during

his lifetime for a project known as the "Western Division of the Persian Empire," a project whose included goals specified the establishment of a world federalist order based on what the documents of that period identified variously either as "The Persian Model" or "The Oligarchical Model."

Given the hostility of the British toward fostering of scientific creativity, one should not be astonished that they often display more attention to the study of past history than to developing anything actually new. The neo-Malthusian world-federalist order which the Venetian networks are fanatically committed to putting into place today is nothing but the old, fourth-century B.C. draft for the creation of a world order based on "The Persian Model," altered only in respect of modern languages and modern costuming generally.

To understand the Venetian network, of which the British have been for two centuries the most conspicuous part, one must understand the duration of an unbroken commitment to finally succeeding in establishing the kind of world order exemplified by that fourth-century B.C. "Persian Model" project. With the death of Alexander the Great, the shattered remains of the "Persian Model" project established their Mediterranean headquarters in Ptolemaic Egypt, and later established the Roman Empire as an implementation of the project.

During the period beginning about 300 A.D., this faction established its headquarters in Byzantium, where a continuing fight between self-identified Platonic and Aristotelian factions characterized that region from 300 A.D. until the conquest of Constantinople in 1453 A.D. Meanwhile, the Aristotelian faction in Byzantium, which usually held the upper hand in government (excepting for the longer period of rule of the Paleologues), established Venice as its principal outpost in Western Europe. During the eleventh century, Venice became officially the commercial headquarters for the Byzantine Empire. With the collapse of Byzantium, Venice and its sister-Byzantine outpost of Genoa became the headquarters of the Aristotelian faction of Byzantium throughout Western Europe.

There is no other internal struggle of noteworthy intensity or scale in European civilization over the entire period since the fourth century B.C. which was not such a continuation of the conflict between the Platonic and Aristotelian forces. Even when leaders of factions were not witting, that their conceptions of policy were predominantly conceptions shaped under the influence of Platonic or Aristotelian methods, the struggles were nonetheless fundamentally struggles reflecting the diametrically opposing, irreconcilable methodologies of Plato and Aristotle.

In the case of Benjamin Franklin, his adherence to the Platonic faction was conscious, as underlined by his leading role in the project for reestablishing Greece in terms of Attic language resurrection and Pla-

tonic principles of organization. Leibniz was another case. Similarly, into the middle of the nineteenth century, the entire struggle within European science between the adherents of physical geometry, on the one side, and of axiomatic algebra, on the other, was a reflection of conscious Platonism by the former, and conscious Aristotelianism by leaders of the opposing faction. This consciousness was assisted by the extensive grounding of educated strata of the populations in classic Greek and Latin texts.

Conscious or not, the controversy respecting knowledge and method between Plato and Aristotle is the only form of fundamental controversy on such matters conceivable within society. Even those forces which are illiterate in explicitly Platonic or Aristotelian writings naturally resurrect at least an approximation of the same issues, even in the remotest corner of society.

In the matter of political economy, Aristotle's writings on this subject are the direct source for the axiomatic features of British and kindred dogmas of political economy today. To know where the British secured their ideas, from Francis Bacon onward (for example), one must trace the connection from London to its masters in Venice and Genoa. To know whence Venice acquired such notions, one must look to Byzantium. To know whence Byzantium acquired such notions, one must look, on the one side, to the direct studies of the writings of Plato and Aristotle, and the fierce and bloody controversies in the Aristotelian's efforts to suppress the teaching of Attic Greek. On the other side, to understand the Emperor Constantine and his followers, one must look to the earlier bases of the "Persian Model" faction in the ruling oligarchies of Ptolemaic Egypt and imperial Rome.

We have now reported enough on this matter to identify the proper premises on which we discard entirely further need to defend our rejecting monetarist doctrines as a whole, and rejecting the subsumed superstitious nonsense concerning "velocity" in particular.

Controlling National Money Supply

The state has two principal instruments for controlling the amount and flows of currency in circulation. One to which we shall turn our attention subsequently, is taxation policy. The other is management of the controlling functions of credit and banking. As we have emphasized, for the case of the developing nation, we situate the task in terms of conditions determined by dependency upon proportionally high ratios of imported capital stocks, and reliance on borrowing of foreign currency claims or grants as a major portion of the means for purchasing such imports.

If there is a shortage of wage-goods, relative to need, and a more grievous shortage of capital stocks, relative to need, then by regulating the quantity of purchasing power, on the one side, and regulating the credit-stimulation of production of goods according to desired rates of change of ratios of capital-goods to consumer-goods production, the amount of currency in circulation will, predominantly, regulate itself. This will be the case, provided we channel increases of the money supply as credit for productive investments, and that we restrict the issuance of increased money supply to the national bank's participation in loans for investment in production of goods.

To this we must add re-emphasis of one point. The amount of the national bank's participation in loan for purchase of imported capital stocks which corresponds to payment of the CIF portion of the import-price must not enter the economy as money placed into circulation. The national bank must increase the money supply only in proportion to the increase of the portion of capital stocks and wage-goods corresponding to the margin S' , and principally for augmenting production for C and V , rather than d .

It is to be stressed in this connection that the idle labor-force added to the roster of productive employment is the principal source of S' for a relatively underdeveloped economy. However, the productive employment of this labor-force is dependent on a corresponding mass of new capital stocks. Therefore, we must not increase employment by methods which reduce the means for purchasing capital stocks according to a competitive level of $C/(C+V)$.

In practice, this problem of increasing urban employment is partially solved for developing economies by special features of the task of developing the productivity of agriculture. The rural labor-force does not leave the land for urban centers in proportion to increases in agricultural productivity above presently prevailing levels.

Our initial objective in the development of agriculture is to reach adequate levels of output for the entire population before shifting some of the rural population to urban occupations. Not only must we provide a desired level of diet for the present level of population, we must ensure that the capacity of agricultural output twenty and forty years hence will develop to levels corresponding to improved consumption for those future generations.

The effects of introducing substantial infusions of modern agronomical technology and supporting logistics into agriculture are not only to increase output per hectare, but to redefine the scale of arable land. The increase in the number of hectares under economical cultivation must be among the first priorities for absorption of the increased productive powers of rural labor.

Furthermore, much existing agriculture is below mere subsistence

levels in terms of agricultural output itself. The initial infusions of improvements in this subsector of agriculture will not produce immediately a net increase of significance in the contribution of product of the market economy, at least not a notable increase. A certain threshold of subsistence-adequacy must be reached before such subsectors of rural production contribute significant product to the market.

This is an important consideration respecting loans for agricultural development. The debt-service charges to agriculture must be deferred in payment (from agriculture) until the development accomplished reaches at least the threshold at which it begins to contribute net product to the market.

It is our rough estimate from examining the general situation in Africa, that we must think in terms of approximately a generation of development from average subsistence levels of production, to an agriculture which is able to supply a substantial ratio of urban population.

In the normal case of rural development, the effect of rural development upon sectoral circulation of money and upon capital-wage ratios of circulation will be governed chiefly by considerations for which the following outline provides a point of comparison. We are not attempting to deal with each possible scenario for nations and regions which already have somewhat varied characteristics and opportunities. The principle of the matter is better communicated by using a reference-model case, as we do here.

Over the course of approximately a generation of energetic development of some rural regions of Africa, we might expect the following. The principles we employ to develop this scenario would be influential in a different scenario and different case.

Over the course of a generation of energetic improvements (for this reference-model case), the principal elements introduced would be modern agronomical and related technologies and the benefits directed toward rural regions of improved national logistics. During this period, the improvement of agriculture would represent a significant contribution to the well-being and moral outlook of most of the population, as well as marginal but important contributions to the rate of national economic development overall. However, relative to net births over deaths in the rural population, the migration of persons from the rural to urban labor-force would not be expected to reduce the absolute number of the rural population, or to reduce significantly the ratio of rural to urban populations.

Somewhere during the process of development, a significant shift in ratios of urban to rural labor-force would first occur. We must expect, on the basis of historically informed analysis of the internal characteristics of rural technological progress, that a shift toward the targets of a 20 percent and then 10 percent rural component of the total labor-

force, would proceed chiefly in a "step-function" fashion. The analogy is the case of application of a continuous amount of heat to a very cold piece of ice. At a certain point, the ice is transformed into water. At a later point, the water is transformed into vapor. There is a numerically significant migration from rural to urban employment between these points of "phase-change," but the shifts in geometry of urban-rural ratios will occur during separated intervals of continuous development.

During this process, the necessary capital costs per hectare for agriculture will increase more slowly than the parity value of output per hectare, and the proper amounts of purchases of manufactured wage-goods by rural populations will increase at a significantly slower rate per hectare than capital purchases.

The outstanding improvements in consumption in rural households will take initially the form of state projects: logistics, health services, sanitation, housing, education, and so forth. These deliveries should be directed according to the notion of new-city mediation into rural areas, and should provide extensive absorption of the leisure life of rural populations in recreational activities which serve the same purpose as the fifteenth-century European Golden Renaissance's promotion of classical forms of artistic composition. The emphasis must be placed on enriching and uplifting the mental and moral individual and social life of both urban and rural populations.

The principles for accomplishing the shift from rural to urban employment were outlined with brilliant success of analysis and foresight by Alexander Hamilton in his 1791 *Report on the Subject of Manufactures*. The history of the successes and failures of U.S. agriculture's development over nearly two centuries since Hamilton's report to the U.S. Congress on this matter of policy, demonstrates conclusively not only that his principles are the only known sound principles, but also that to deviate from those principles is to incur disaster.

For purposes of first approximation, we might assume that the development of agriculture and urban life in Africa would tend to follow a pathway similar to that defined by Hamilton. *In principle*, this would be the case in fact. The difference is that the advanced agronomy exemplified by U.S. agriculture exists to define the world market for agriculture, and to define implicitly the kind of urban society such a development of agriculture complements. Therefore, although the development of Africa today must necessarily conform to the principles Hamilton outlined, we must add into the application of those principles the special effects, including shock-effects, of introducing a modern technology at a relatively high rate—which we have no choice but to introduce.

In the "classical Hamiltonian case," the emergence of a marginal surplus from agricultural development would create the margin of agricultural goods convertible into real purchasing power to purchase

manufactured capital and wage-goods. This market would have proportionate effects on the potential for developing the corresponding industries.

We must reach that "phase-change" point as soon as possible. We accomplish this with aid of logistical development, creating the logistical preconditions for suitable forms of market specialization, and thus the market connections facilitating relative substantial introductions of such factors as soil treatment, irrigation, fertilization, improved seed stocks, suitable high-turnover production of animal protein for market, and mechanization.

This sets into motion departmental changes in internal social-cost ratios of rural production, in terms of sectoral values of $C/(C+V)$, $S/(C+V)$, and $d/(C+V)$. Most of d would be represented by the state and related services which are implicitly V items in a developed economy.

The progressive increases in those ratios are associated with corresponding increases in \bar{W}_s , in the form of both energy directly used for agriculture and energy embodied in both fertilizers and manufactured goods, as well as other things. So, the increase of \bar{W}_s and C/V are the determining capital factors of increase of $S/(C+V)$, and hence of $S'/(C+V)$ in the agricultural sector which determines the rate of increase of potential growth of the urban sector of the economy in this scenario.

This rate of growth of the urban sector is too slow: *the developing nations must accelerate the rate of overtaking industrialized economies much more rapidly, in raising the potential relative population-densities.* Therefore, we superimpose a forced rate of development of urban economy (forced, relative to the indicated scenario-of-reference), as well as accelerated infusions of technology into the rural sector. The urban development absorbs those portions of the labor-force which are either unemployed or employed at low, and therefore unproductive levels of capital-intensity; it also absorbs a gradual shift of persons from the rural to urban labor-force. The principal vehicle for accomplishing such "forced economic development" is state projects.

However, although this "forced development" shifts the pattern of development, it does not change the principles involved. The principled character of the development of agriculture, and of shifts from rural to urban labor-forces remains the same. The pattern remains the same, albeit in shifted geometry.

Correspondingly, the phase for "take-off" of the manufacture of consumer goods begins with the corresponding breaking-points in the step-function described for agricultural development. If this is not recognized in both principle and practice, the economy is plunged into the monstrous deformations of development we noted as implicit in the misguided policy of "import substitution."

Therefore, we must project three general phases for the patterns of

capital-wage goods development. In the initial phase, until the first takeoff point ("phase-change") has occurred in market-oriented agricultural development, the emphasis on basic heavy industry producing capital goods must be high, at what some may view as a painful expense to rate of expansion of the production of manufactured wage-goods. This capital-goods development is focused on the markets represented by agricultural development, development of national infrastructure, and the needs of capital-goods industry itself. In the second phase, triggered by emergence of the corresponding phase-change in agricultural development, the manufacture of wage-goods increases, and market for capital stocks by such industries becomes a significantly increased, added component of capital-goods industries' output. In the third phase, a relative increase of the ratio of capital-goods investments, over wage-goods investments, occurs relative to the corresponding ratios characteristic for the second phase.

Most of the imported capital will be directed accordingly, during each of these three phases. Since much of this purchase of capital stocks will occur through grants or loans, or direct foreign private investments, very little of the capital development will effect an increase in the requirement (or, toleration of) increases in the level of money supply. The principal increase of the money supply during the first phase will correlate with increased employment of industrial operatives, which will correlate chiefly with the effects of agricultural development on the supply of wage-goods.

In some cases, it is necessary to import portions of the net margin of national food consumed. This must be secured through grants or loans. This is necessary, and can be turned into a sound investment by directing this food as the equivalent of wage-goods to households of the rural or urban goods-producing labor-force. This use of imported food thus becomes directly a capital-factor of economic development.

By restricting the new issuance of national currency notes to participation in loans for investments in production of goods, in the manner indicated earlier for national-banking practices in general, and by ensuring that no increase in money supply is caused by the CIF portion of the investment in imported capital stocks, an adequate growth of the money supply is ensured.

The function of the national bank, to provide all of the created credit of the national economy and to coordinate foreign credit, must be coupled with policies of regulation of the private banking sector. We must prevent that sector from operating in rentier-financial directions or from using a "multiplier factor" to generate credit from sources other than national-bank lending plus money deposits.

It follows from this that no private bank within the nation can be a subsidiary of or otherwise integrated with any foreign financial institu-

tion which is predominantly rentier-finance in orientation or which is using methods akin to those of unregulated "offshore" financial institutions. We must not permit the Venetians to penetrate the credit and banking of the nation through a private-banking side door. If such foreign institutions are to be dealt with, they will be dealt with directly by the national bank, and no other institution of the nation.

There should be either 100 percent or nearly 100 percent reserve requirements on all obligations of private banks, excepting deposits of cash plus private capital in the form of paid-in cash equity of the bank. The reserve requirements on cash deposits of the bank's depositors should be set at the lowest level prudent banking practices recommend.

The regulation of the money supply of a nation is based on restricting credit-issuance to a combination of only cash savings plus national-bank action in creating credit.

The Role of Taxation Policy

Insofar as flows of credit and investments of savings are concerned, the combined effect of credit and taxation policies must be to make the after-tax earnings on productive, technologically progressive, goods-producing investments significantly more attractive to investors and lenders than all other categories of investment and lending.

In present-day nations, the role of taxation policy in this respect is accomplished by setting a high rate of taxation on the upper brackets of a graduated personal and business income-tax schedule, and offering a complementary range of most attractive tax credits as rewards for concentration of capital and loans in the most desired categories of investment.

The importance of this is underlined by examining the case of a major nation which has had extremely bad taxation and credit policies over most of the past thirty-five years, the United States of America.

At the beginning of the postwar period, 62 percent of the national labor-force of the United States was employed as operatives producing goods in either rural or urban occupations. Today, approximately 32 percent of the actual national labor-force is so employed. In other words, *V* declined from 62 percent to 32 percent of the labor-force, while *d* increased from 38 percent to 68 percent. This is the key to all of the decay and other leading problems of the United States today. The principal cause for this decay is shifts from productive to nonproductive investments caused by wretchedly misconceived taxation and banking policies.

In general, over the thirty-five year period, there has been an uneven rate of cumulative increase in preference for nonproductive investment

income over productive investment income. This is the result of a bias in taxation policy which prefers to tax productive income at higher rates than certain categories of nonproductive income. It is also the result of credit and banking policies which price credit out of the range of most productive investment uses at present, and which, in effect, restrict the flow of credit increasingly into high-gain speculation on fictitious appreciations.

Since the flows of capital determine the creation of places of employment, the indicated shifts in overall composition of the labor-force are the natural consequence of the effects of indicated policies of taxation and banking.

It is useful to the purposes of this report to elaborate a bit further on that case here. Not only do the facts show what taxation and credit policies a developing nation must avoid as if these were bubonic plague. The facts also provide useful evidence respecting the economists and bankers who have been responsible for introducing and defending such monstrously incompetent policies. The present state of the economy of Britain, and the complementary process of decay of the economy of the United States, inform us conclusively of the nature of the competence of leading U.S. and British bankers and economists in matters of monetary and economic policies.

It has been argued, for example, that the shift away from productive employment has been caused by technological advances in U.S. production. Two facts suffice to prove that argument nonsensical.

First, we should couple the statistics on age and obsolescence for U.S. industry over the course of the postwar period with the evidence that during only one period, approximately 1962 to 1967, was there a sustained, if modest increase in estimated productivity of the economy as a whole.

Second, noting that the overall net gain in productivity of the U.S. economy has been negative for the span of the whole period to date, we must assess the economic significance of the genuine technological progress, and productivity, which occurred—until approximately 1974–1975—at the point of production of goods.

There are three points in the postwar history of the U.S. economy on which to focus to compare age and obsolescence of capital stocks with that of the immediate postwar period. One point is the subject of the 1958 McGraw-Hill study, showing an alarming accumulation of obsolescence. The next point is 1966–1967, during which NASA's effects combined with the investment tax-credit program of the Kennedy administration had caused a modest, but significant renewal. The third point is the 1970s as a whole, during which age and obsolescence increased monstrously, and in which vital, advanced elements of productive capacity, as well as some aged elements, dropped out of existence.

Granted, until a recent period, the advancement of what Mr. Brzezinski labeled the "technetronic" sectors had been increased as a reflection of international bankers' policies to this effect. Although the advancement in communications and computer technologies was a most impressive by-product of NASA's stimulus—until 1979—the use of the developments has been, unfortunately, chiefly directed toward increase of the power of people-manipulation for social-political control purposes, rather than directing these developments toward their proper main use, reducing the costs of administration and reducing labor-intensive categories of employment in services. Indeed, administration and labor-intensive services have been emphasized for increase, to replace productive employment.

So, the capital-intensity for the labor-force taken as a whole has been shrinking, and at an accelerated rate since 1974–1975. The ratio of $S/(C+V)$ has therefore risen slowly relative to $d/(C+V)$. As a result, d has overtaken S in the U.S. economy, which is now operating at a substantial net loss—if one compares the entire U.S. economy on this point to some hypothetical agroindustrial corporation.

Under the influence of Arthur Burns and like-minded persons, the Eisenhower administration in 1954 adopted credit policies aimed at stimulating recovery from the Korean War recession by promoting consumer-credit purchases of durable consumer goods, such as automobiles.

For short periods, such shallow-minded tricks appear to succeed. The consumer uses the portion of income otherwise accumulated for cash payment of durables purchases, and pays instead only a monthly portion of the price of the durable commodity as the price for immediate possession of that commodity. The financial system discounts the consumer's debt for cash or credit delivered to the business which produced and sold that durable. The immediate period's rate of volume of sales of such durables multiplies.

However, the exercise has limits. The first type of limit is the portion of household income which can be converted from complete purchases to time purchases in that fashion. The second limit is defined by the useful life of the commodity purchased.

To make short of this particular point, during late 1956 and early 1957, the situation developed in which households owed significantly more on the unpaid balance of the purchase price for a new automobile than the price at which they might have purchased the same model of vehicle in equally good condition at a second-hand automobile lot. When the security for a debt has a market-value significantly below the unpaid balance of the debt, this is a warning sign that the issuance of credit must quickly slow down. That occurred, in the form of the U.S. recession of 1957–1960.

During 1965 to 1967, under President Johnson and Federal Reserve Chairman William M. Martin, the Venetian networks moved into government and banking policy with the impulse we reported earlier. If the ratio of flows of capital to consumer-goods investment had been badly distorted under Eisenhower, the ratio began to collapse toward the end of the Johnson administration. Under Nixon, Kissinger and Arthur Burns in their different but complementary fashions accelerated the collapse of the U.S. economy to the point of the 1971 crisis. Under Carter, 1977 to 1980, the directed collapse of the economy grew hideous.

At the point of production, in some industries, there has occurred significant technological progress. The significant progress in some industries has tended to spill out into others, either as better materials, better tools, or better product designs. As we emphasized earlier in this report, a certain amount of progress is required merely to maintain a constant potential relative population-density. In terms of energy measures, this is expressed by required increases in \bar{W}_s for a constant potential relative population-density. In terms of the social costs of a preceding period, this appears to involve an increase in the capital-intensity ratio, $C/(C+V)$. Consequently, it is a fallacy to assume that some manifest technological progress, in and of itself, implies a net advance in productivity, as expressed by $S/(C+V)$. Technological progress below a certain degree, below a certain rate, is only slightly moderated decay, but decay nonetheless.

That is the applicable statement for the case of the United States over the whole sweep of the past thirty-five years. It has been decaying.

For such reasons, it should be clear that the rise of d relative to S , as expressed in the cited shift of the percentile of productive operatives from 62 percent to 32 percent, is the principal expression of a cost-inflation which has far outrun the gains in productivity effected through a relatively limited degree of realized technological progress. It should also be clear that policies of credit and taxation inducing a flow of credit and investment away from production toward nonproductive ventures, has been the principal cause for this cost-inflation, this decay of the U.S. economy.

However, it must be emphasized that the present international inflation rates, those building up during the 1970s to the present moment, are not entirely the result of cost-inflationary impulses. There has been an accelerating *monetary inflation* over this recent decade. The processes causing that monetary inflation have most direct bearing on the policy-matters we are considering at this point in our report. Therefore, we outline the mechanisms of that monetary inflation summarily here.

The eruption of the accelerating monetary inflation of the 1970s represents a factor of inflation in excess of effects of the cost-inflation we have just briefly examined. It is monetary inflation added to inflation

of the costs of national economies' production, a monetary inflation which, in turn, accelerates the cost-inflationary tendencies on which it is superimposed.

This particular trend for accelerating monetary inflation erupted during 1967, with the crisis of the pound sterling culminating in the November 1967 devaluation, and the ensuing crisis of the U.S. dollar, during February and early March of 1968. As we shall emphasize here, the conditions producing accelerating monetary inflation were triggered into their present form by the combined follies of Arthur Burns and President Richard M. Nixon from the beginning of 1969 through and beyond the dollar crisis of August 1971.

Before turning to the effects of Nixon's monetary follies, a bit of background is necessary.

During the second and third quarters of the last century, the dominant trend in price movements of produced commodities was downward. This was the result of sharply rising productivities, caused in term by the spread of the steam-powered industrial revolution. Beginning the final quarter of that century, following the 1877 to 1886 interval approximately, there has been a secular rise in prices to the present time, with interruptions marked only by intervals of catastrophic depressions. In net effect, although the depressions have temporarily lowered prices, the ensuing periods have seen resumed growths of prices to the same general effect as if no intervening collapse of prices had occurred. That is, the depressions interrupted the short-term rises in prices, but actually aggravated, rather than ameliorated, the underlying causes for the long-term inflationary movements.

The central cause for this long-term rise in prices has been the increasing power of the British monetary system over world credit, trade, and investment, a power increased considerably by assimilation of the credit and banking system of the United States under British control.

This form of British subversion of the United States began with the 1876 to 1879 implementation of the treasonous Specie Resumption Act. The U.S.A., obliged to absorb the national currency notes issued under Lincoln's policies, the principal concentrations of U.S. domestic banking credit, as well as the U.S. debt itself, were placed under the effective control of a combination of London financial institutions and the virtual mere agents of those institutions centered in New York City.

This British control of the U.S. economy's credit mechanisms was exerted to strangle crucial elements of national industrial and infra-structural development. British control of the U.S. railroads is exemplary of this arrangement. London used its power to collapse U.S. credit to put the U.S. economy through a series of depressions, and thus imposed upon the United States the Federal Reserve System. This System has

been a mechanism for increasing control over the U.S. economy through a cabal of private financial institutions based in the British Commonwealth, institutions which have virtually assimilated the leading Manhattan-centered financial institutions, including the major commercial banks of that city, into virtually mere agents of the British Commonwealth's financial system.

British control was greatly increased following the First World War, assimilating the United States more fully under Venetian financial control in the Versailles monetary system. The elimination of independent German financial power and the cutting of Russia largely out of the system, meant that virtually no significant concentration of international financial power existed outside the British-dominated system.

At the end of the Second World War, the British policy was again foisted on the United States and the world generally, in the form of the Bretton Woods System. This took the form of the International Monetary Fund, and, during the 1950s, the development of the World Bank around bureaucratic personnel shifted from the recently closed British colonial office. These institutions operated in partnership with a cabal based in the Bank for International Settlements. There was no significant concentration of financial power in the world but the Bretton Woods System and its BIS partners.

This situation intersected the postwar historical-strategic considerations we outlined earlier in this report. Among the features of that intersection was the weight of economic development impulses set into motion during the postwar construction effort (first, in preparation for nuclear preventive war). From 1957-58 onwards, it was necessary for the Venetians to break the will of powerful nation-states, especially the United States, if that Venetian network was to employ successfully its vast financial power to bring about the neo-Malthusian world-federalist order at which its principal forces aimed. The habit of technological progress had to be broken; to break that habit, it was essential, for reasons which will become clearer almost immediately, to break the back of the last vestige of the gold-reserve system.

That was accomplished during the successive British and U.S. monetary crises of 1967, 1968, and 1971, and aided immensely by the subsequent petroleum-price crises of the 1970s. President Nixon's follies of August 1971 freed the Venetian networks (most emphatically the British) to launch the operations centered upon the so-called Eurodollar market.

Although the "Eurodollar market" operation has been a relatively recent development, the crucial features of this operation embody in a concentrated form all of those features of the British monetary order which caused the past hundred years' long-term inflation. The connection between the recent developments and the longer-term pathology is

relevant to this point of our report inasmuch as we are generalizing a matter of policy, rather than some exceptional, episodic development.

The unregulated, "offshore" market is identified as centered principally in such branches of the British Commonwealth as the banking systems of Canada, Hong Kong, Singapore, and the British West Indies. The distinctive feature of this complex of financial institutions is their power to transform an amount deposited within that system by a two-digit or even higher multiplier. So, ten U.S. dollars actually deposited may become up to 100 or more U.S. dollars of lendable paper assets. In other words, this system has the ability to print the equivalent of money on the largest scale, and at the highest rates of international finance, known in modern history.

By means of agents or mere dupes placed in leading policy and executive positions within the central banking and governments of various nations, the Venetian, British-pivoted network of financial power contracts significantly the power of regulated banking systems to generate credit for domestic and foreign-trade needs. The private persons, entities, and even the national governments of those nations are thus impelled to turn to the only alternate source of large masses of credit available: the "Eurodollar market." This "Eurodollar market" is able to lend fictitious assets, accepted as legitimate credit, at increasing borrowing costs. In respect to the actual cash deposits within the system, this unregulated, "offshore" financial complex is able to milk the national economies at the highest rates of usury known in modern times.

To make the arrangement more evil, the largest single source of deposits into the "offshore" system is substantially in excess of \$200 billion annually of funds from the international drug traffic. The world is being looted financially with the aid of sums taken from the bodies of our destroyed children.

The high interest rates associated with austerity policies such as Volcker's prevent the conversion of the fictitious credit of even the "Eurodollar system" into leveraging of productive investments. Rather, capital from productive investments is sucked into nonproductive, high-gain ventures of financial speculation, such as fictitious appreciations of ground-rent valuations, as the only location in which significant credit leverage could be employed.

So, during 1980, Volcker's measures collapsed the productive sectors of the U.S. economy by 20 percent, with merely a slight drop in the GNP, and a 25 percent further contraction of the productive sector will be the result if Volcker's policies continue through 1981.

The refinancing of operating-capital loans and other costs of production and distribution of goods, at ever-higher rates, and the increased flow of credit to nonproductive subsectors of flow, create a purely monetary inflation. This monetary inflation accelerates shifts out of

production, while increasing per capita fixed charges for such overlapping items of expense as rent and debt service. This action accelerates the rate of cost-inflation, and accelerates the rate of monetary inflation. That is, on the latter point, the increase in the ratio of the nonproductive to productive sector causes an equal amount of money-value of monetary inflationary input into the economy to effect a new, higher rate of monetary inflation in prices.

It is that tendency, that same process which always characterizes the rentier-financier system. It is based on increasing use of fictitious assets in lending, and prefers strongly profits on incomes of preestablished assets and production, to loans for new production. The wild insanity of the "Eurodollar" eruption of the 1970s only expresses the long-term tendency inherent in the British (Venetian) system in a more concentrated, and explosive form.

Obviously, unless U.S. policies are changed, the United States is characterized at this moment as one of the greatest financial bubbles in history, on the verge of being burst. As the production of goods-values to meet obligations to rent and debt service shrinks, the point is being approached at which the capitalized values of rent and debt service must collapse. In brief, the bubble is burst.

In addition to the invaluable and conclusive evidence against British policies to be learned from such facts, there is another feature of the matter directly bearing on the kinds of credit and taxation policies which developing nations are obliged to adopt. Developing nations exist in a world economy which is dominated by the large nations with the relatively most advanced technology. Although, from time to time, anger or related emotions prompt this or that developing sector spokesman to propose to "go ahead without the industrialized sector," such autarkical independence is impossible. Without technology from the industrialized nations, genocidal death must spiral out of autarkical dreams in many regions of the developing sector for purely economic reasons. The structure of the world economy as defined by conditions in the industrialized sector so impinges on the internal policies of the developing nations.

The forms of credit and taxation policies which industrialized nations must choose, if they are to recover from the present slide toward general collapse, are the forms of credit and taxation policies which developing nations must employ to defend themselves against the impact of the same world-market conditions.

The high tax rates in the upper ranges of personal and business income taxes are, as we noted above, offset by attractive tax credits on income of investments in the national interest.

The principal tax credits are for *depreciation*, *depletion*, and *amortization* of an *original capital stock invested in production of goods*. To

these three, interrelated categories, two forms of *direct* tax credits are added. We provide tax credits for *research and development* bearing on the advancement of basic physical science, biological science, and advancements in productive technology! We also establish categorical *investment tax credits*, in addition to these, for selected subcategories of these same items.

We allow no favored tax treatment for other categories of nonproductive income for so-called capital gains on appreciation of either tangibles or intangibles. Only the process of improvement of production (and productivity in production of goods) qualifies for well-advised policies of favorable tax treatment.

From study of this matter, we have determined that effective tax-credit programs must also provide favored tax treatments for the savers whose savings are used to purchase such capital stocks of production. The simplest mechanism for accomplishing this is as follows.

It is a simple matter to calculate the basis for distributing a duplication of all or part of the tax credits earned by a farm or business firm to those owning the savings invested in that firm. We total the tax credits earned by the firm for a year. We total the sum of paid-in-equity plus unpaid balance of loans. The former total is divided by the latter, determining the tax credit earned by each dollar of invested or loaned savings.

The holders of paid-in-equity and the private person or lending institutions owning the unpaid balance of the loan are issued proportional tax credits, not money. These tax credits those persons can apply to reduce the tax liability on their income. In other words, those persons would calculate their tax liability as if they had no tax credits earned, and would then deduct the tax credits earned from the total tax obligation.

In the case of the duplicate tax credits earned by a banking institution, the bank should retain half the credits it accumulates, and redistribute the remaining half to its depositors.

We need not be concerned with the lower-income households in this matter. In a properly designed graduation of income taxes, what is determined to be the basic standard of household income should be untaxed. Taxes apply only to portions of household income in excess of that amount. The allowed amount for each household is based on allowed tax-free income for each additional member of the household.

As households rise above that basic income level, they are obviously well-advised to deposit as much of their income as they can afford as savings. It is a simple calculation to show that a household which saves has a cumulative increase in spendable tax-exempted income, as well as tax-sheltered savings.

Otherwise, the effect of the combined taxation and credit policies indicated here concentrates all accumulations of economic power within the nation in the hands of those who invest in the relatively highest rate of development of the productivity and wealth of the nation as a whole.

The general nature of the effects of such taxation policies on monetary flows is obvious, and need not be elaborated here. What is to be emphasized, if merely mentioned in summary here to that purpose, is that the addition of such taxation policies suffices to define the characteristic behavior of the monetary system. We need no longer concern ourselves with monetary problems intrinsic to the Venetian variety of monetary system.

7.

How the Exporting Nations Organize Credit

When Pakistan's President Bhutto not only collaborated with the 1976 Colombo effort, but added to his offenses against British sensibilities by insisting on nuclear energy, U.S. Secretary of State Kissinger announced to that President (of a presumably sovereign and allied nation): "Mr. Bhutto, we are going to make a horrible example of you." Subsequently, Bhutto was overthrown by a military coup, and—as Kissinger's threat implied—judicially murdered.

When developing nations threaten to become serious in their efforts to secure a new world economic order, we are accustomed to expect waves of assassinations and political coups organized by assets of the British intelligence services. These cruel examples are not the only means the British use to prevent developing nations from becoming an effective political force for reforms.

The British, although singularly defective in the higher aspects of moral and intellectual qualities, are not lacking in a certain quality of low, feral cleverness. Added to what they have been taught by their Venetian masters, London has almost three centuries of experience in the arts of manipulation of colonial peoples. Added to this wicked skill, the British intelligence services are expertly estimated to have a greater density of agents-in-place in Southeast Asia, for example, than in the old days, before the British military was pulled back "West of Suez."

The picture of manipulation we summarize here is a composite of our first-hand experience on both sides of North-South negotiations to date: our discussions with leading figures among our British adversaries, and our repeated experience with anger and sadness, to watch how developing nations have been defeated once again by the British-led forces.

"Oh, the natives are getting restive again," is the gist of what such British officials have said to us, with a smirk in their voices. "We know how to deal with that sort of situation. We'll let them have their row at

the UNO. By the time they have exhausted themselves with their rhetoric, all will be nicely under control."

This, to our best knowledge, has been precisely what shaped the outcome of every negotiation of North-South policies except the already cited cases of Colombo 1976 and Havana 1979. We also have observed what happened after Colombo, 1976. Mrs. Bandaranaike of Sri Lanka, Mrs. Indira Gandhi of India, Mr. Bhutto of Pakistan, and Foreign Minister Fred Wills of Guyana, were soon out of office—among other related developments—and the resolution thus safely consigned to the archives. By December 1980, Fidel Castro was arguing vehemently for a policy directly opposite to that for which he had been spokesman at the Havana nonaligned conference of 1979. That excellent resolution, too, had been relegated to the archives.

We also witnessed, at close range, how the 1975–1976 effort was derailed through the leading corrupt role of officials of UNCTAD—dumping every effort worthwhile for sake of unity around a physiocratic scheme which would have been unworkable if achievable, and which was incapable of achieving anything but at least postponing, and considerably neutralizing the early effort toward workable goals.

In general, the problem has been this: Because of a general omission on the agenda of negotiations, the rest of the agenda is transformed into expressions of sentiments, mere rhetoric. Except for some bilateral cooperation, most of the agreed points are essentially mere rhetoric; there is no significant North-South agreement to efficient steps of implementation, but rather a description of what the parties are resolved publicly to wish to hope jointly might occur. Those elements of the agreements which do provide implementation predominantly cannot be implemented, because the most crucial of the preconditions for implementation has not been resolved.

If, and only if that crucial, much omitted agenda point of proposed agreements is fought through as the leading issue of North-South negotiations, are those negotiations capable of producing anything but a fresh production of rhetoric. By what means are the industrialized nations going to mobilize the specific accounts of long-term, low-cost credit and grants, without which development is merely a wishful dream? This is complementary to the subsumed issue: How are the existing debt overhangs of most developing nations to be reorganized to permit new influxes of credit into those regions?

Before turning to the outlines of the means by which such credit could be mobilized, we dispense with two misguided opinions typical of erroneous judgment encountered among some developing nations' representatives.

It is often argued, either that the industrialized nations could supply adequate credit merely if they chose to do so, or, that by some device

such as a "raw materials cartel" modeled upon OPEC, the necessary income for development can be successfully extracted.

Although, in the sense we shall elaborate here, the industrialized nations have the potential to create the masses of credit required, those nations presently do not have such credit available *under existing monetary institutions*. The needed credit could be mobilized, *only if there were a rather radical reform of existing monetary institutions*.

Any negotiation which does not place the reform of such institutions in the first place on the agenda, is a negotiation which is intrinsically incapable of producing much of anything but empty rhetoric.

The attempt to force the extraction of required sums by cartels would, under existing institutions, simply collapse the economies of the industrialized nations, with genocidal consequences. The cartelized prices would be higher, true. However, the total income from reduced sales at such cartelized prices would be less than the income from previous volumes at lower prices. Suppose the developing nations reply to that: "Very well, we shall keep our riches in the ground, for the future." The consequence of that is that the genocidal cycle of famine, epidemic, and regional insurrections and wars begins.

The issue on which we focus here is the issue which must be faced. *There is no alternative to this but genocide.*

The general situation of the developing sector as a whole presently is that the low level of capital-intensity of existing production has brought the potential relative population-density down to below the level of the existing population. The level of production is falling under the weight of the combined effects of rising petroleum prices and monetary decay generally.

Although increased trade among developing nations would be helpful, by increasing rationalization in the division of production of goods, the improvement in productivity so effected is marginal relative to the magnitude of the urgent need.

The greatest single cause of genocide at this moment is the burden of pyramided, refinanced external debt service. A canceling of some of the debt of the "least-developed countries," a moratorium on some other portions of debt-service payment, plus a reorganization at reduced borrowing costs of other debt, would alleviate the conditions greatly for the moment. However, this sort of relief, by itself, would be only a temporary benefit, a postponement of the genocidal nightmare of economic devolution, unless other measures of economic development were added.

If we measure S' , C , V , and d competently, taking into account all of the households of economies, the average level of $S'/(C+V)$ for the developing sector as a whole is presently negative. In terms of that

population, any effort to effect development within the limits of the developing sector itself would be a tragic, genocidal blunder.

What some evil persons and circles of the Club of Rome genre have in mind is a certain form of economic self-development of developing nations. If one were to eliminate the portions of the population which are essentially outside the market economy or of marginal (near-subsistence), low-technology categories, the ratios of existing capital stocks to total households would be improved, with a rise of $S'/(C+V)$ to modest, workable levels.

For example, if one-third of the population of Chile were to die, and conveniently bury itself tomorrow, the relatively developed agroindustrial sectors of the Chilean economy could be made rather viable. Chile, generally speaking, is a relatively developed economy at its core, and thus indicates the greater elimination of population needed to produce like "benefits" for the economies of other regions of the world.

Such genocidal solutions would appear to work, but even such murderous remedies would fail for two reasons. Foremost, and properly most obvious, the policy-framework in which such genocide might be made attractive to some forces within the developing regions would continue to operate. The spiral of devolution (and genocide) could not end with the initial phase of genocidal triage—as long as those policies persisted. Second, the population which appears to be "excess" to the genocidalists of the Club of Rome et al., actually contributes part of the looting base for the existing, relatively more developed subsectors of the economies. It may produce no surplus, but it is a part of the virtual-work component of the economy.

The problem, which we have illuminated with reference to this evil point of illustration, is akin to what occurred in Europe under the Venetians and Genoese over the course of the late thirteenth and fourteenth centuries, and resembles also somewhat the case of central Europe during the period of the Thirty Years War (1618 to 1648). We have a region of the world whose population potential has fallen below its existing population levels. The kind of immoral governments and parties in that region of the world which will tolerate, or even aid in implementing Club of Rome policies, are governments and parties so morally depraved that they will behave in ways consistent with that depravity. Given the intensity of the spiral of famine and devolution which confronts us, we must tend to fear that the "New Dark Age" of fourteenth-century Europe would be a mild and slow-moving unfolding of events compared to what must erupt throughout all Latin America, all Africa, and most of Asia, should the first phase of the next, proposed state of implementation of the Carter administration's "*Global 2000*" policy be unleashed.

It is to be emphasized that the developing sector as a whole simply lacks the output of capital stocks needed to reverse the present slide into famine, epidemic, and successive waves of homidical eruptions. *At present* the industrialized sector is not producing the levels of output of capital stocks needed to solve the crises of the developing sector as a whole. However, if measures were taken to rapidly expand the levels of capital-intensive employment in production of goods within the industrialized sector, sufficient capital stocks for the needs of the developing sector could be mobilized.

The discussion of policy must abandon the British way of looking at matters. Forget for a moment how much money exists, or what effects might be imagined to occur if higher money prices for developing-sector exports were available. Under present conditions, all such speculations on money-aggregates and prices are useless fantasy.

It is necessary to define the policy in terms of amounts of goods produced, especially production of quantities of capital stocks embodying advanced technologies.

Rather than accepting the British superstition, that goods will automatically follow prices, we must view the matter in a nonsuperstitious manner. First, define the production and trade in produced goods, and, second, describe the monetary system *which must be created* to make possible the production of and trade in those additional volumes of goods.

The first thing, therefore, is to stimulate the increased production of required goods *in the industrialized nations*. Without that, all else is empty rhetoric, useless fantasy.

The developing nations' leaders must not view the matter at hand in Hobbesian terms of reference. It is not, contrary to British dogma, a conflict between industrialized and developing nations over distribution of shares of the world's wealth. If we were to reduce significantly the presumed "share" of the industrialized nations, those nations' economies would collapse—physically collapse. The fall in levels of produced output in the industrialized nations would mean that the conditions of developing nations are utterly hopeless.

The developing nations' leaders must view the matter at hand in terms of the question: *How is the world to be managed* to get all of us out of the present mess? The developing nations' leaders must look inside the industrialized nations, to discern now the internal affairs of those nations could be changed in ways adequate to produce the exportable volumes of capital stocks which the developing sector requires for its own very survival.

From any other point of view, the very idea of improvement of the prospects of the developing sector is sheer empty rhetoric, tragic fantasy.

The Industrial Potential

At this point, it is still a physical possibility to increase the productive output of the developing nations sufficiently. That opportunity is ebbing away rapidly, as the scale of basic-industry operating capacity is being contracted under present levels of interest rates, and as agriculture in the United States has begun to collapse substantially at an accelerating rate—for the same reasons.

The first, immediate measure would have to be the expanded use of existing productive capacities still in operational existence. In the case of the United States, this would resemble the industrial mobilization out of the Great Depression launched in 1940. It would mean putting labor back into factories, stimulating agricultural production, and shifting patterns of employment away from "labor-intensive services," toward industrial and related employment of goods-producing operatives. A 30 percent to 40 percent increase in the goods-producing component of U.S. output would be feasible over a period of several years.

Not all of that increased goods output would be available for export.

Although the shift from unemployment and "labor-intensive services," to industrial employment, would rapidly increase the net productivity of the U.S. economy, there would be three elements of cost associated with increased outputs. *C* and *V* would increase in real terms. Furthermore, to develop the kinds of high-technology productive capacities needed for export of high-technology capital stocks to developing nations, there would be required a massive deployment of investment of capital stocks to create such workplaces within the United States itself.

The effects on the capital stocks and labor-force of the United States over the past decade are comparable to those suffered during the 1929 to 1939 decade of the Great Depression. Productive capacity is largely depleted, and the labor-force has been significantly reduced in mean-skill levels relative to 1969 to 1971. For these and other reasons, the 1940 to 1943 period of industrial mobilization is a model of reference for comprehending the kinds of problems confronting the United States in an industrial renewal effort today.

It would be reasonable to assume that over a few years of such reindustrialization, the volume of capital-stocks export available for delivery under long-term credit to developing nations could be approximately 10 percent of present levels of U.S. goods output. (This would be in addition to exports against U.S. dollars earned by developing nations through trade.)

Not only would such a program require increased flows of capital stocks from the *S'* portion to create high-technology, capital-intensive workplaces. The internal trade of the industrialized nations would be

increased for similar reasons. Today, the United States could not reindustrialize efficiently without substantial imports of certain categories of capital stocks from Japan, France, and the Federal Republic of Germany: essential categories of modern technology no longer exist within the United States.

Forget, for the moment, money incomes. Look at the effects of such reindustrialization of the United States in terms of real elements of production and distribution: capital stocks and wage-goods; $S/(C+V)$, $C/(C+V)$, $d/(C+V)$, and $S'/(C+V)$, and the triple-function defined by $S'/(C+V)$, $C/(C+V)$, and \bar{W}_s for conditions of technological progress.

For example, to accomplish such a program, the United States would be required to commit itself to completion of at least 1,000 gigawatts of additional nuclear energy-generated electrical-output capacity by the year 2000 A.D. At a current price of 1.5 to 2.0 dollars per watt of such capacity (the cheapest source of electrical energy presently known), we are indicating a twenty-year investment in the order of between \$1.5 trillion and \$2.0 trillion (constant-1981 U.S. dollars) for this item alone. In other items of infrastructure, not noting urban and private industrial infrastructure, another \$1 trillion to \$1.5 trillion is easily identified as indispensable.

This can be achieved, together with growing volumes of high-technology capital-stocks exports, provided the growth rates are maintained to accomplish this, and that the percentage of the labor-force employed as goods-producing operatives is redirected back to about 45-50 percent. However, such growth means over \$100,000 (constant-1981 U.S.) dollars invested for each additional workplace created.

Similar, if somewhat different, considerations apply to the cases of other industrialized nations.

How this is to be achieved takes us into two levels of matters of credit and taxation. We begin with national credit and taxation policies, and then proceed to outline the essential functions of a gold-reserve-based new monetary system.

The reforms of credit and taxation required in the United States are identical in principled features to those we outlined for a developing nation's requirements. It is the same in principle for Europe.

The principal difference, especially in the case of the United States, is that, instead of developing the future urban labor-force through development of the rural sector, in the United States the great supply of labor must come from d : the employed and substantial shifts out of administration and nonhard-technology services.

The combined function of credit and taxation policy-changes is *virtually to panic* income (money savings and luxury spending) away from the nonproductive sectors, and into equity and savings deposits for hard-technology investments.

The most immediate effects are *monetary*. We halt that growth of nonproductive sectors which is presently the principal cause for cost-inflation and the principal mediation of monetary inflation. At the same time, we lower the debt-equity ratio by a large flow of money accumulations into equity (from relatively wealthier) individuals, followed by a directing of savings into bank deposits of banks oriented toward lending for tax credit-earning forms of investments.

That will *immediately* halt all domestic causes for continuing monetary inflation. That will cause a spiral of interest rates downward.

The second, if slightly lagged effect, will be a shift of patterns of employment, away from administration and services in all but hard-science-oriented occupations, back toward expansion of employment of productive operatives.

By increasing the liquidity base in the flows into the productive sectors, and decreasing the flows into nonproductive sectors, it becomes feasible to use such measures as an Act of the U.S. Congress to oblige the Federal Reserve System to follow national-banking policies in the issuance of currency notes, and to dry out other multipliers within the U.S. banking system generally.

This would be supplemented by imposing regulation on attempts to import credit from unregulated, "offshore" financial networks. A single "Honest Money Act" of the U.S. Congress would suffice, to prohibit honoring the credit or financial operations of any financial system which did not maintain acceptable standards of regulation of its credit generation.

By drying out inflationary money flows, by concentrating existing liquidity in tax credit-oriented productive investments, and by tying up low-priced new, "national banking" credit in creation of productive capital expansion of secure physical assets of productive capacity, the United States would develop rapidly a new quality of capability for increasing volumes of export of capital stocks with low-cost long-term credit issued for that export activity.

The export of capital stocks at low borrowing costs for long-term credit is based on the determination of a portion of S' available for export on long-term credit. "Available" in this setting means that the U.S. economy can prosper to the required degree without receiving real-goods compensation for that credit extension earlier than is specified by the terms of the loan.

Under those conditions, U.S. "national banking" can issue amounts of low-cost long-term export credit exactly proportional to that portion of S' produced. The United States would be issuing the equivalent of currency notes for capital-investment loans to other nations on the same basis we outlined for internal operations of this sort in the preceding section of this report.

Why a Gold-Reserve-Based System?

If a developing nation had no mass of held-over debts, and if its needs could be met entirely by bilateral agreements with the United States, the various technical arrangements of credit, banking, and taxation practice we have developed up to this point in the report would be sufficient to solve the task. The matter is rather more complicated. Developing nations generally have relatively large accumulations of debts, some presently of dubious merit as financial assets, and the development of every developing nation requires activities from among a number of other industrialized nations, as well as other developing nations. Furthermore, the production and credit of the industrialized nations are highly interconnected. To a certain degree, bilateral agreements should be encouraged; development based exclusively on bilateral agreements cannot cope with the deeper and broader problems.

The development of the Sahel region of Africa is a useful reference.

As many nations of this region have desired over more or less longer or shorter periods, the development of this and adjoining regions recommends some form of "common market" among the sovereign nations of the area. Provided the principle of sovereignty is not contaminated, that this is a community of principle and economic cooperation among the states, there is no perceivable proper sort of objection to be made to our knowledge, and many powerful reasons to recommend it.

The most obvious of the practical reasons for desiring such institutionalized economic cooperation include water management, transportation, and energy. We must reach agreements through which we move excess water from water-surplus regions into arid and semi-arid regions. To the extent such new movements of water can also be means for movement of bulk freight by barge, so much the better. The development of agriculture requires efficient transportation and urban centers functioning on behalf of agriculture, as we indicated in discussing the new-city conception. Energy should be produced according to optimization of the relationship between places where it is best produced and where it is most needed.

Much of such project development is across the borders of several nations. The effort is a unit-effort, from the standpoint of engineering requirements. Such projects are best conducted under one master contract. The economies achieved, the quality of result, all militate for such options.

Admittedly, the heavy engineering required to develop the Sahel region (regions, to be exact) as the future breadbasket of Africa is one of the world's great undertakings. In addition to water projects, a complex of transportation networks is required. New cities must be planned as part of the effort, and the nucleus of such new cities begun. The engineering directly applied to the soil, is another major item.

It is costly? Therefore, shall it be done slowly? *Since the benefits begin only after the project is undertaken, it is far better to do it quickly.* We are limited in choices on the point only by the ability (and willingness) of the populations of the region to develop the benefits of the project. We would probably prefer to build the general infrastructure, and to put into place quickly those elements of improvement which could be built effectively around the bottlenecks represented by the lack of skills of the present rural populations.

For example, soil treatment, fertilizers properly applied, better seed-stocks, and so forth, added to the agricultural production of any level of farming technology, will always increase the per hectare and per capita yields (on the average). So, we lay the general foundation for the planned levels of improvements for the coming two or three decades of continued progress. We add to that foundation those particular phases of implementation which the population can and will assimilate for advancement at each phase.

If we can muster the capital stocks (including the heavy-engineering work required) from the world's short supplies of capital stocks at present, let us then negotiate a fifty-year, deferred-payment, nominal-interest construction loan for the project, and complete the initial phase as quickly as possible.

That is this reporter's recommendation. Leaders of African nations may have a different approach to the same matter. No matter. This recommendation serves the purpose of illustrating the kind of problem we confront in delivering technology to African nations on the scale required.

The same principle arises as African nations work to elaborate guidelines for a division of labor in respect of the regions' essential new industries. The point, of course, is to use the limited market of a portion or all of a region of several nations as a base for one or two industrial investments of a particular type. One nation specializes initially in one, two, or three such key new industries, the next the same, and so on.

Insofar as these new industries are suppliers of either capital stocks for improvement of agriculture, or capital stocks for urban industries, as most will be, the market required to establish each depends upon the rates of investment in agricultural and urban-industrial development in all the nations of that particular market. The particular industry requires this "capital-formation climate" in adjoining nations for its products; similarly, as industries of adjoining nations provide its own raw materials and intermediate commodity goods, the adjoining nations' development of such vendor industries is of vital importance to the importing industries.

Such problems may be addressed with aid of the creation of regional development banks. Such banks could be either specific financial institutions, using imported credit for specific multinational projects of the

region. They could be specialized agencies securing credit for national banks of particular nations.

The point we are illustrating with aid of such examples is the need for coordination of terms of lending on the exporters' side, as well as the importers' side. On both the side of the industrialized nations engaged in net exports of capital stocks, and the developing nations which are net importers of such capital stocks, the physical and monetary aspects of development are massively interlinked.

The problem of coordinating credit for developing nations' imports of capital stocks, and the problem of reorganizing existing debt-overhangs of developing nations are interlinked in this matter. We can treat the two problems separately, in succession, on condition that we bear in mind that the same institutions which coordinate new forms of credit issuance must also have the capability for facilitating the needed debt reorganization.

The European Monetary Fund

The optimal, presently visible pathway to establishing the new credit-issuing capabilities required among nations would be the so-called phase two of the existing European Monetary System, the *European Monetary Fund*. If this were established, with the included features we shall identify here, the joining of the Fund—not the European Monetary System otherwise—by the United States, Japan, and key OPEC nations would suffice to bring into being a new international credit-issuing facility.

If developing nations joined the same Fund, in the manner of banking clients who give such a bank a preferred position, or as full members of the Fund itself, *a new world monetary order would be established in principle*. This would be the establishment of such a new monetary order in fact once the problem of overhangs of outstanding foreign debt of developing nations were resolved administratively.

On condition that the nations participating in this arrangement were oriented to the export, banking, and taxation policies we have developed thus far in this report, then—and only then—would a satisfactory new world economic order come into being.

Such a Fund is established by a group of capital stocks-exporting nations, which use such a Fund as a common export credit-issuing institution. In effect, the national-banking institutions of the exporting nations assign claims on their own national currencies equivalent to a portion of their nation's *S'* as that national banking system's investment in a bank.

Since the value of national currencies may fluctuate, and since nations

incur balance-of-payments imbalances among one another, a gold-reserve system is indispensable for such a credit-issuing institution.

The members of the Fund agree to settle imbalances among one another by transfer of title of gold bullion among one another. This gold bullion should be given a fixed price, determined as the competitive price for purchasing replenishment stocks of gold bullion from mines (a parity price). This is calculated on the basis of the amount of mining required to meet international gold-bullion needs for gold-reserve bullion.

In the case of the European Monetary Fund, this gold-reserve feature would be established properly by setting the *ECU* (*European Currency Unit* of the European Monetary System) at a gold-parity price, and thereafter fixing the value of the ECU at that price.

At that point and thereafter, all paid-in deposits and loans issued would be denominated in ECUs at the current gold-parity price for the currencies in which loans were issued and new deposits made. (The incentive to defend the gold-parity value of one's national currency is made most significant.) All member-nations of the Fund therefore peg their currencies to a gold-parity value. *This includes depositors and borrowers.* (For the moment, we ignore special, temporary exceptions to this.)

A *gold-reserve system* is not to be confused with a *gold-exchange system*. By the latter, we mean a system in which each currency note placed into circulation is supported in value by a corresponding deposit of gold bullion or coin in the vaults of the issuing institution. The institution of a gold-exchange system at this juncture would kill more people than a worldwide epidemic of pneumonic plague—in fact, it would probably foster such a plague.

By gold-reserve system we mean that the current total of currency plus currency claims due against the accounts of a nation are settled either with exports of that nation (other than gold) or that the shortfall of such exports is covered by an amount of gold at the parity price for gold. Thus, by implication, every currency note circulating internationally or within that nation's national economy is "as good as gold."

The "honest value" of a nation's gold-reserve stocks is protected by the power of the Fund to crush any speculator who attempts to drive down the gold price of a client nation's currency by artificial means of monetary warfare. It is in the interest of the Fund to take precisely such crushing action in each case. Only such a fund, an instrument of a group of nations, has the resources to assure this.

If the consort of industrialized and developing nations indicated agrees to establish such a new monetary system, they are a combination of forces with legal means to impose their collective will upon the dominant international monetary institutions (like the IMF, World Bank,

BIS). By such means, a reorganization of the overhang of foreign debt of developing nations is accomplished.

The first step is to classify the external debts of developing nations. In some cases, the debts should be canceled (in financier's language, "written off"). In other cases, they are obligations on current transactions which need no treatment. In other cases, they must be "rescheduled" at full or adjusted value. Furthermore, where debts bear high interest charges, those charges must be reduced by agreement of the monetary institutions and the debtor-nations.

Rescheduled debts are best realized in the following form.

The national bank of the debtor nation issues a long-term bond, at nominal interest, and, where judged necessary, with deferred first-payment provisions and related scheduling procedures as applicable. The object is to transform the portion of the debt covered by this new issue from an income-producing instrument to a discountable, premium instrument.

The creditor exchanges the debts he holds against the nation for these bonds. Provided he may borrow against these bonds, at low interest rates, and relend that borrowed capital for approved categories of new loans or for direct equity investments in tax-sheltered productive capital, the creditor is enabled to convert the nominal-yield bond into a source of profitable lending or investment. Provided that an expanded market for productive investments (and related loans) is being created, the creditor gains a great advantage in holding these bonds as assets, relative to a nominally high-yield, but nonperforming claim he might be obliged to write off entirely.

It is to the advantage of both the nations involved, and the financial systems of the exporting nations, to effect such measures of financial reorganization as rapidly as possible.

To make such new issues discountable for approved categories of lending and investment, there must be a new institution which rediscounts such loans through the mediation of national banking systems. A Fund such as the EMF is the kind of institution which can provide this function among its members.

There is one indispensable restriction for the rediscounting of such bonds. The bond may be used only for security for borrowing capital. This capital may be borrowed only for approved categories of loans or investments in *increasing* high-technology, relatively capital-intensive goods production, or transferred by sale of title to a qualified purchaser. We must not generate a flood of liquidity onto markets in excess of the portion of *S'* available for investment. Otherwise, such bonds would be used only at par value for determining the balance of assets and liabilities of holders.

With these final observations, our report has become adequate, if not complete. We have covered all of the most essential points provoked to our attention by the draft "*Lagos Plan of Action*," outlining the different standpoint of reference from which we attack the same problem defined at the outset of that plan.

Our object has been to provide something equivalent to a reference manual on crucial matters which are customarily either not emphasized, or not situated in the most appropriate context. Having completed that assigned purpose now, we conclude our report here.

About the Author

Lyndon Hermyle LaRouche, Jr. is among the most intensely controversial of today's international political figures, as well as the center of an ongoing factional storm in the leadership of his own nation's Democratic Party. His self-avowed and bitter personal adversaries include Henry Kissinger, the leadership of Willy Brandt's Socialist International, the Club of Rome, David Rockefeller and his Trilateral Commission, the British Fabian Society, and international pro-terrorist networks associated with Ramsey Clark and Philip Agee. He is also the target of various operations, including repeated assassination projects, by the powerful, Hong Kong-centered, financial coordinators of the international drug traffic.

Since 1974, the international controversy around the author has been motivated by principally two interconnected issues. One of these is the continuing attack by the author and his collaborators against the Club of Rome's proposal to perpetrate the genocidal murder of billions of people in the developing sector by the projected date of 2000 A.D. The second issue is LaRouche's 1974-75 proposals to create new gold-reserve-based international credit and banking mechanisms for reorganization of developing-sector foreign debt and for financing of large-scale technology transfer. On both points, LaRouche's avowed adversaries and others, as observers, have repeatedly described the author as a "serious potential danger" to the neo-Malthusian, world-federalist schema, which all of those adversaries are obsessively committed to bringing into being during the immediate period ahead.

The reader is forewarned, that one of the most efficient ways in which to smoke out the identity of accomplices of Henry Kissinger among leading figures of developing-sector nations (for example), is to appear to defend LaRouche's proposals, and then wait to discover who reacts with violent libels against LaRouche, and possibly with threatening demands that all contact with the hated LaRouche be broken off.

Apart from such expressions of hatred, the author is most widely identified as an economist. Broadly, he is rightly identified as continuing the mercantilist current of economic science, as equated with Gottfried Wilhelm Leibniz and the American System of political economy, of Alexander Hamilton, Friedrich List, and Henry C. Carey.

Among modern mercantilist currents in economic science, LaRouche and his immediate collaborators are distinguished by the outcome of a discovery LaRouche effected in 1952: employing the geometric method of physicist Bernhard Riemann's 1854 *On The Hypotheses Which Underlie Geometry*, to develop a successful, new approach to discovering the correlation between progress in technology and increased rates of economy growth. Since that approach was applied to computer-assisted analysis, beginning late 1978, LaRouche's contributions to mercantilist economic science are most widely identified with what is termed the LaRouche-Riemann method.

LaRouche's authority as an economist has been greatly increased recently by the contrast between his own successful projection of the results of the Volcker measures, and the consistent failures of all competing econometric institutions, such as the Wharton School of Lawrence F. Klein and Chase Econometrics. To date, the results of the continued Volcker measures have been exactly those LaRouche and his associates projected in a published study of November 1979.

In addition to being a prospective 1984 Democratic Party candidate for President of the United States, the author was an influential candidate, against both Jimmy Carter and Senator Edward Kennedy, for the 1980 nomination. Earlier he was the 1976 candidate for President of the subsequently defunct U.S. Labor Party, that party an attempt to revive the nineteenth-century Whig Party of Henry Clay, Henry C. Carey, and Abraham Lincoln.

The author is currently Advisory Committee Chairman for the National Democratic Policy Committee, Chairman of the Board of Directors of Executive Intelligence Review Research Inc., and a director of a prominent scientific association, the Fusion Energy Foundation. He is also a leading figure of the International Caucus of Labor Committees, an association modeled in practice on the academies of Plato, Leibniz, and Benjamin Franklin.

He was born in Rochester, New Hampshire (U.S.A.) on September 8, 1922, and is married to Helga Zepp-LaRouche, a political figure of the Federal Republic of Germany.

